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THE MAGAZINE
OF
HORTICULTURE,
BOTANY,
AND ALL USEFUL DISCOVERIES AND IMPROVEMENTS IN
RURAL AFFAIRS.

“ Je voudrais échauffer tout l'univers de mon gout pour les jardins. Il me semble qu'il est impossible qu'un méchant puisse l'avoir. Il n'est point de vertus que je ne suppose à celui que aime à parler et à faire des jardins. Pères de famille, inspirez la jardinomanie à vos enfans.”—*Prince De Ligne*.

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P R E F A C E .

THE Fifteenth Volume of the Magazine contains a great variety of information in every department of Horticulture, which will be found enumerated in the following Table of Contents.

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THE MAGAZINE OF HORTICULTURE.

JANUARY, 1849.

ORIGINAL COMMUNICATIONS.

ART. I. *A Retrospective View of the Progress of Horticulture in the United States during the Year 1848.* By the EDITOR.

THE season of 1848, though rather below the general average temperature, has been, on the whole, favorable to a vigorous and healthy growth of trees and shrubs. In some parts of the country, the severe cold of last winter greatly injured the fruit crop, so much so, that, in some places, it was a total failure. Our readers have already been informed, (Vol. XIV. p. 283,) that the plum crop, in the great region for that fruit around Albany, New York, was entirely destroyed. In New England, the peach crop, we believe, was the only fruit which suffered from the same great alternations of heat and cold. Other fruits, especially pears, were more or less injured by the excessive warmth, and the hot sun, in May, just as the blossoms were fully expanded, causing many of them to fall, and of some kinds, more tender than others, the whole crop was lost in this way. A moderate quantity of moisture during the summer favored a fine healthy growth, and a mild and prolonged autumn, without frost, ripened the wood finely, and developed an abundant supply of flower-buds.

The winter of 1847 and '48 was, on the whole, above the average of cold; but, for variableness, it has rarely been exceeded. January opened with mild weather, and without snow; but, on the 11th, the thermometer suddenly fell to 12° below zero, the lowest during the winter; on the 15th, it was rainy and foggy, with the temperature at 40°; on the 18th,

at 3°; and, on the 22d, 46°; the 28th was rainy, succeeded by pleasant weather to the end of the month. February commenced with a snow storm which fell to the depth of a foot: on the 5th, this was augmented to 15 inches; the morning of the 11th, the temperature was again 6° below zero. This was followed with milder weather, with rain, until the 26th, when the temperature again fell to 0. March was cool, with considerable snow, and, up to the 20th, there was but little appearance of spring. Milder weather, however, soon set in, and, by the last of the month, the ground was free from frost, and in good order for ploughing. April continued variable; on the 19th, there were three inches of snow, succeeded, on the 20th, with the temperature at 18°; favorable weather followed, and, on the 21st, we found the *Pyrus japonica* in bloom. May opened rather cool, and the peach trees were not in bloom until the 4th: on the 9th, pear trees were in bloom; a cold easterly storm set in on the 11th, and this was followed by one or two excessively hot days, which greatly injured the blossoms. June again continued cool, with easterly winds and rain, up to the 10th. After that, the weather was more favorable for a few days; but easterly winds and rain, alternated with cool weather, continued to the end of the month, doing material damage to the crop of hay then just cut. July was equally as unfavorable up to the 3d, when it cleared away, and, from the 4th, it continued pleasant to the end of the month. August was a favorable month; from the 10th to the 25th, the weather was excessively warm and fine. September opened pleasant, and continued fine and warm up to the 12th, when the temperature fell, and frost was experienced in cool situations; the last part of the month was also cool, within a degree or two of frost. October was pleasant, and the first frost to injure dahlias was on the 8th. November was mild to the 9th, when there was a slight fall of snow: and, on the 11th, the temperature was only 9°. Snow fell again, on the 20th, to the depth of four inches; after which pleasant weather succeeded. December up to this date has been almost as mild as the corresponding month of 1847. Much rain has fallen, and, as yet, no frosts have been experienced to check the usual labors of the season.

The reports of horticultural exhibitions, and our notes of

our tour in western New York, will show the abundance and excellence of the fruit crop generally. Peaches were never more abundant in the middle states, and the only fruits, of which the crop has not been plentiful, in the New England states, are those above mentioned, the plum and the peach.

HORTICULTURE.

Under this head, no more important subject has occupied attention during the year than the cultivation of the pear, either as dwarfs or pyramidal trees, upon the quince or pear stock, after the mode so generally adopted in France, and which we have given so full an account of in our Foreign Tour. The economy as well as the beauty of this mode of growth is beginning to be better appreciated, and a greater desire manifested for such trees. We would scarcely suppose that we should be understood as recommending this plan for *orchard* cultivation. By no means. Our remarks always have reference to garden culture, either on a large or small scale; whether ten trees or ten thousand. By planting pyramidal trees of such kinds as do well upon the quince, and those which do not upon the pear, a much greater crop can be realized, in the end, than from the same ground planted with trees in the ordinary way. This has been proved by foreign cultivators. A writer in the *Transactions* of the London Horticultural Society gives the result of his experience, (Vol. VII. p. 213.) He states that the same number of superficial feet of wall devoted to the training of pear trees upon the quince and pear stock showed the following results:—

Four kinds, the Gansell's Bergamot, Brown Beurré, Crasane, and Colmar, on the *quince*, produced 30.5 to 4 on the pear; dividing the first sum by the latter gives 7.6 as the average in favor of the quince—that is, a fraction over *seven* pears on the quince stock, to *one* on the pear stock. We have not room here to give the whole statement of the writer, but shall embody it in an article in a future number; as it is decisive as to the advantages of growing the pear on the quince stock.

Some excellent papers on summer pruning, and the general management of pear trees, with a view to early fruiting,

have been given in our last volume : that which is, perhaps, of the greatest value, by Mr. Thompson, (p. 29,) copied from his account of the gardens near Paris, where he had an opportunity of seeing the finest specimens of this mode of culture. Other excellent papers will be found at pp. 361, 505. The writer of the article last named, whose success was complete, if we are to judge from the size of the pears produced, has adopted a new mode of producing early maturity, that is, by taking off the leaves, in connexion with root-pruning : all who are much interested in the growth of dwarf and pyramidal trees should attentively read these excellent articles.

We should not forget to call attention to the capital article from our correspondent, Dr. Weed, (p. 145,) upon the growth of the pear upon the apple, a subject which has occupied much attention. We feel gratified to know that, in connexion with Mr. Humrickhouse's article, (Vol. XII. p. 393,) it contains all that has yet been written upon this interesting question. It only remains to be seen how time will affect the growth of those kinds which, so far, have succeeded upon the apple.

The culture of the grape has received a due share of attention in our last volume ; an article on the formation of vine borders, (p. 49,) and another on the treatment of vines in pots, (p. 193,) will be found of the greatest interest to those who are cultivating this delicious fruit. So much has been said in regard to the preparation of borders, that we deem it important to know every thing in relation to their formation. We are advocates of a *rich* border, but prefer that this should be made as the vines progress, rather than to over-feed them at first, after which it will be much more difficult to keep up the requisite degree of stimulant. We shall undoubtedly have more to say on this head in the current volume. The growth of vines in pots is attracting more attention, and the ornamental appearance of the plants when in fruit, as well as the small space they occupy, and the facility with which they may be brought forward, should induce all who possess a graperly or greenhouse to cultivate a few vines.

Much attention has recently been given to the cultivation of the Fig, and, with the view of aiding those who are in want of information as to the best mode of management, we

have copied some excellent advice in the last volume (p. 244.) We have already in bearing some six or eight of the most valuable varieties, and shall endeavor to give a full account of those which prove the most abundant bearers, together with our success in the treatment of the plants. So delicious a fruit should be cultivated by every one who can find room for a few trees.

The strawberry question has ceased to attract much attention from the fact that the conclusions which have been arrived at are deemed entirely satisfactory. Some new varieties have been introduced to notice the past year, the most prominent of which are Burr's New Pine, Prince's Profuse Scarlet, and Richardson's Late. Further trial is requisite to show whether these sorts are any improvement upon our well established kinds.

As a new feature in the onward progress of pomological science, the past year may be noted for its pomological conventions, two of which have been held; one at Buffalo, and the other at New York. We have no doubt but that beneficial results will flow from these annual gatherings of cultivators from all parts of the Union; and that the interchange of opinions, the information to be obtained in regard to particular localities or latitudes, and the peculiarities of soil and situation, will establish some data by which new varieties may be introduced into various sections of the country with a much greater certainty of success. In this way, we look for an accumulation of *facts* which cannot fail to be of the greatest value. The attempt to settle names, reduce the number of varieties in cultivation, and make a list of rejected fruits, we believe, will not be attended with the good effects which some cultivators imagine. We wish them, however, every success. We have given a full account of the doings of the convention at Buffalo; and, as soon as the report of the New York Convention comes to hand, we shall make an abstract of it in the same manner.

Several new varieties of pears, of high reputation, have fruited this year, for the first time. Among those which promise well, are the following:—Triumph de Jodoigne, a very large December pear; Beurré Benoits, or Auguste Benoits, a September pear, excellent; Jersey Gratioli, October,

fine; St. Nicolas, a late autumn variety; *Compte de Le-lieur*; *Bonne des Zees*, a delicious September pear; *Beurré de Rhine*; *Episcopal*, a late winter pear; *Henri Van Mons*; *Souverain d'Ete*; *Adele de St. Denis*. The following American varieties, introduced to notice for the first time, also promise well:—*Brandywine*, *Ott's Seedling*, *Howell*, and *Gustine's summer*. The experience of another year has also confirmed the excellence of the following kinds:—*Moyamensing*, *Swan's Orange*, *Reid's Seedling*, *Osband's Summer*, *Belle Epine Dumas*, *Dunmore*, *Jeane de Witte*, *Eyewood*, *Jalousie de Fontenay Vendee*, &c. *Knight's Monarch* has at last been obtained, and it proves to be a superior fruit. We have had specimens in eating two months, and yet have some that will keep a long time. The new varieties now mentioned, we shall describe and figure in the present volume.

FLORICULTURE.

The taste for plants, which has rather fallen off, or, at least not kept pace with that for fruits, for the last three or four years, appears to be reviving. To encourage this has been our object, and we have endeavored to present our readers with all the information relative to new plants, and the best mode of cultivating superior specimens of the choice varieties already in our collections.

Since the expedition of Mr. Fortune to China, but a limited number of new plants have been introduced, by the London Horticultural Society. Some of the zealous English nurserymen have collectors in South America, through whom a number of valuable acquisitions have been made: but they have been principally greenhouse or hothouse plants, and not so generally desirable as those sent home by Mr. Fortune. Nearly all the plants of any interest which have been introduced, will be found enumerated in our Floricultural Notices.

The subjects which have been admirably treated upon in our last volume, are the dahlia, (p. 27); the cacti family, (p. 119), by Mr. Tescmacher; the Chinese primrose, in a most capital paper, by Mr. Cadness, (p. 395); the Fuchsia, (p. 445,) by Mr. Thorburn; the *Calceolaria*, (p. 492,) by Mr. Kennedy; the *Leschenaultia*, (p. 447,) and the *Achimenes*, (p. 494,) by

Mr. Saunders. Besides these, we have given detailed articles on the culture and management of the magnificent tribe of Japan lilies, (p. 34,) the *Anemone japonica*, (p. 165,) and two papers on the camellia, (p. 301,) the concluding portion of which will appear in the early numbers of the present volume. Our General Notices embrace a fund of valuable facts, in regard to the growth and treatment of numerous plants, flowers, &c. Some which we may more particularly allude to, are the azalea, (p. 179,) the *Erica*, (p. 181,) greenhouse specimens, (p. 279,) the camellia, (p. 413,) the pelargonium, (p. 420,) the orange, (p. 418,) the hollyhock, (p. 414,) and many others which will be found under the head of General Notices, in our table of contents.

There have been many additions to collections of plants, the past year, some of which are deserving of particular note: *Begonia fuchsioides*, an exquisite variety, with long drooping scarlet flowers; *Gésnera Jerroldiana*, with very brilliant flowers; *Heliotropium voltairanum*, with deep-colored blossoms; *Clerodendron splendens*, and infortunatum; *Edgworthia chrysantha*; *Hoya imperialis*; *Clématis smilacifolia*, a very handsome species; *Stigmaphilon ciliaris*, another fine running plant; *Gladiolus* variety, Prince Albert, very superb; *Sálvia splendens major*, a new variety, much finer than splendens; *Weigelia rosea*, &c., &c. The new phloxes of the past year, though many of them handsome, have not embraced any distinct or striking varieties. The fuchsias have been more desirable, and a few of them, quite distinct.

The new pelargoniums are of the highest excellence. We scarcely thought it possible to make much improvement upon *Aurora*, *Isabella*, and others, but the new seedlings of Mr. Beck are as distinct as any plants could well be: there is a clearness of the eye, a distinctness of the colors, and a firmness of petal, which quite change the character of this fine flower. *Rosamund*, *Centurion*, *Cruenta*, *Blanche*, and others of the seedlings of 1847, are truly exquisite. It is gratifying to see the increased attention which has recently been bestowed upon the pelargonium; but we trust it is only the commencement of that good taste which will elevate it to the highest place among greenhouse plants. What are termed the *fancy* kinds, are now much sought after abroad; and at-

tention has been directed to the production of new kinds; the French have thus far raised the best, some of which are quite curious. The flowers are of moderate size, and irregular, and the contrast of colors very great; Mr. Beck has produced one or two very good ones. They will, no doubt, soon be introduced to American collections.

Of seedlings, the year has not developed many varieties of merit. A new camellia is mentioned, of Mr. Feast's, (p. 256,) as very beautiful. The Japan lilies, so far, have not sported into any new or peculiar colors; we have many seedlings, which, the present year, we hope to see presenting some distinct features, but time will determine this. We have urged upon amateur cultivators, as well as nurserymen, the importance of raising the hardy rhododendrons and azaleas, from seed, in order not only to have them so abundant that they may be found in every garden, but with the hope of producing new and beautiful varieties, as has already been done in England; a cross between those foreign kinds, which have the brilliancy of coloring of the Indian sorts, and their half-hardy character, with our well known and hardy species, would undoubtedly result in the production of a race of higher colored and hardy varieties. Some fine verbenas have been described at p. 220.

The naturalization of many ornamental plants is a subject which has not received sufficient attention, though one of the greatest importance. It is well known, that many plants, formerly cultivated in the greenhouse, and supposed altogether too tender to withstand the severity of our winters, are now classed among our hardy plants. If we trace them to their native countries, we find they are from the same localities as others more recently introduced, which we deem tender, or, at least, only half hardy. Dr. Lindley, in a late number of the *Gardener's Chronicle*, has asked the question, whether "the camellia is a greenhouse plant?" And answers it, by a series of facts which leave but little doubt that, under certain favorable conditions of soil and situation, it may be found equally as hardy as other plants, from the country of the camellia. The *Pyrus japonica*, *Wistaria sinensis*, Chinese honeysuckle, and Tree pæonies, are companions of the camellia in its own woods, and yet they are found to resist the cold, without injury, as far north as the latitude of 42°.

Such being the fact, why may not the camellia become eventually a common garden shrub, at least as far north as Philadelphia? At another time, we shall recur to the remarks of Dr. Lindley again, and give the facts which he adduces, relative to the temperature, soil, &c., of the climate of China, —and the best means of accomplishing successful naturalization.

We are led to these remarks, from having recently seen a fine plant of *Buddlèa Lindleyana*, one of Mr. Fortune's discoveries, near Shanghae, which stood out last winter, without protection; though only a young plant, set out in the spring of 1847, and making but a slender growth, the root was uninjured, and, when we saw it in September, it had thrown up shoots, five feet high. We have no doubt, that, in a light soil, where the growth would be checked early, and the wood perfectly ripened, it will be found quite hardy. The *Ailantus*, a well known hardy tree, from China, is only hardy under certain conditions of soil and locality. Last winter, we had one half of a long row of these trees, which were killed both root and branch, while the other half remained uninjured. The trees stood upon a piece of ground, on a side hill; and part of the row sloped into a hollow, where the water was confined, after heavy rains; the consequence was, that all the trees, around which the water stood and froze, were killed; while those from which the water drained away, were alive to the points of the shoots. It will thus be seen, that, in the naturalization of plants, much will depend upon a knowledge of their natural habits, and the soil and situation in which they grow. Success must not always be expected, at first. One failure should not discourage the ardent cultivator; but, where climate, and the nature of the plants, lead us to suspect their hardiness, experiments should be repeated, till they remove all doubts.

ARBORICULTURE.

A great and increasing interest has been manifested in the subject of Arboriculture; and it is gratifying to find our agricultural societies, aided by the liberality of gentlemen of wealth and taste, encouraging the cultivation of forest trees.

We some time since noticed the offer of a premium, for the culture of the oak, in Essex County, (p. 189,) and we are pleased to know, that the giver of that premium is deeply interested, not only in the culture of the oak, but in the introduction of every tree and shrub, of which there is any hope of their proving hardy in our climate. The Deodar cedar, the cedar of Lebanon, the araucaria, the *Abies Douglasii*, the *Cryptomeria japonica*, and other species of pines, have been planted in the most favorable locations, for testing their hardiness and adaptation to our climate.

A very perceptible increase has been made in the varieties of ornamental trees and shrubs, now offered for sale by nurserymen. It is also gratifying to see the mode becoming more general, of planting out specimen trees, in order to show the real merit of every species or variety. Until a taste for planting is much more generally diffused than it is likely to be, for some time, this cannot but prove highly advantageous to the zealous nurseryman; for purchasers are always more ready to buy, when they can see what they are planting will grow up to, with proper care and attention.

Now, that California has become part of our great Union, we hope to see many of the trees and shrubs, which clothe the declivities of the Sierra Nevada, and other mountains of that territory, and some of which, Col. Fremont mentions with so much interest, in his report, introduced into our gardens. The *Pinus monophyllus*, is a particularly interesting species of the coniferous tribe, seeds of which, we hope, will be speedily sent home. With the aid of government officers, seeds might be transmitted to the Patent Office, and from thence be distributed throughout the country, as others have already been from that department. The mountainous regions of the United States, on the Pacific coast, now extending so many hundred miles, are rich in hardy trees and shrubs, and, with the facilities which now are, or soon will be, afforded for their introduction, we hope to see them added to our collections.

RURAL ARCHITECTURE.

The taste for ornamental planting and rural landscape, is rapidly spreading. The iron roads, which now unite town

and country, by almost annihilating time and space, have enabled gentlemen of wealth or leisure, to escape from the dust and heat, and turmoil of the crowded city, and enjoy the pleasures of a country life. No person, who feels an interest in rural improvement, can travel in any part of the country, and not be impressed with the great strides which have been made within a few years. More especially, in New England, is this taste everywhere apparent. Intersected in all directions, as the country is, by railroads, in the vicinity of Boston, and other cities, the number of suburban residences has not only greatly increased, but they have been laid out and embellished with a degree of taste, which reflects much credit upon the proprietors, when we recollect that, in but few instances, have practical men been consulted. We are aware that many of these suburban grounds would have far greater attractions, had they been laid out in true taste; yet their general neatness and beauty show how great is the desire to possess something approaching that object, so much coveted—a pleasant country seat.

We are desirous of contributing all in our power to aid in the dissemination of true taste in ornamental planting, and we shall endeavor to give more attention to the subject. Zealous as we have been, to promote the interests of horticultural science, we have directed less attention to rural improvement, than is our intention hereafter. Not that we consider mere plans of so much importance, as the architectural journals will be consulted for these; but to give, occasionally, specimens of some of the best examples of ornamental gardening in our vicinity.

In Beverly, several pretty cottage and villa residences have been recently erected; one, belonging to F. Haven, Esq., of Boston, laid out under the care of Mr. Brown, when completed, will be a place of much interest. J. D. W. Williams, Esq., intends to rearrange, and greatly improve his beautiful place, at Elm Hill, Dorchester. Col. W. P. Winchester has recently erected a large and costly villa, at Cambridge, near Mt. Auburn, on Charles River. He intends also to have the grounds laid out in the best style, under the superintendence of an experienced gardener. We might name other places about to be improved, but we shall endeavor to give a full account of them when completed.

COMMERCIAL GARDENING.

Commercial gardening continues in a flourishing condition. New nurseries spring up in various parts of the country, especially in the west, and most of the older ones go on augmenting their stock, and increasing the extent of their grounds. How far this success can be looked upon as an evidence of the profitableness of the profession of the nurseryman, is a question we shall not undertake to enlarge upon. A country so extensive as ours, and so bare of good fruits, as it is in most instances, must, for a long period, create a good demand for fruit trees; and, from the increasing taste for ornamental planting, a fair demand for trees and shrubs cannot otherwise than be expected.

The introduction of new varieties of fruit, from abroad, and of new seedlings at home, is a subject attracting the attention of zealous nurserymen; at the present time, when so many sorts are annually produced, it is not to be supposed, that all of them will be found to possess great merit; and if, among twenty poor kinds, one of high character is found, it will repay the time, the labor, and the expense, attendant, in adding such to collections. It does not follow, that every amateur should add all the new fruits to his collection that the nurseryman adds to his catalogue. By no means. Yet it would be injudicious, and greatly retard the progress of pomological science, to indiscriminately reject all new fruits, merely because some of them have not come up to the standard of excellence which had preceded their introduction.

In our several volumes, we have annually given some account of the principal nursery establishments in New York, Philadelphia, Baltimore, Washington, and other cities. In our last volume, we have given two articles upon the gardens and gardening of Western New York; these will be concluded in our present volume. We therefore need not recapitulate what we have already stated, in reference to the state of commercial gardening in these places.

In the neighborhood of Boston, there is the usual activity among the trade. The reports of the Massachusetts Horticultural Society will show the great number of fruits which have been exhibited, trees of which will be found for sale in

the principal nurseries. And, while so much care has been devoted to this department, it is gratifying to know, that equal pains have been taken to introduce all the most showy and interesting varieties of hardy trees and shrubs, especially those adapted to the ornamenting of lawns and pleasure-grounds. Of greenhouse, hothouse, and garden plants, a reference to our Floricultural Notices, and to the reports above mentioned, will show how much has been accomplished since our annual summary of 1847.

GARDEN LITERATURE.

Few publications have appeared the last year. The principal have been Gray's *Botany of the Northern United States*. Tuckerman's *Synopsis of Northern Lichens*; *Transactions of the N. Y. State Agricultural Society*, for 1837; *Report of the Patent Office* for 1847; Rogers's *Scientific Agriculture*. The two numbers of Colman's *European Agriculture*, completing the work; and three additional numbers of our *Fruits of America*, (Nos. 4, 5, and 6;) No. 7 will appear the present month, and be followed in regular order, by the others. A new edition of Allen's *Treatise on the Grape*, enlarged and revised, has also just appeared, and we shall notice it in our next.

ART. II. *The Blight in Pear Trees.* By J. H. JAMES, Esq.
Urbana, Ohio.

I OBSERVE, by your notes of a tour to Buffalo, that you have had an opportunity to see the blight in pear trees, as exhibited in the nurseries at Buffalo and at Rochester. You had previously announced your opinion, (Vol. XI. p. 5,) and here again repeat it, "that the blight of the *west* is not the blight of the New England states," which you call *insect blight*, and attribute, on the authority of Mr. Lowell and Dr. Harris, to the action of an insect known as the *Scolytus pyri*. I wish to raise, with you, the inquiry whether you have not too hastily decided that the western blight is different from yours, and

to induce the examination whether the notion of an insect blight rests on any sufficient authority.

Until 1844, I was a firm believer, on the report of others, that the fire blight in pear trees was caused by an insect, and that the spread of its ravages might be checked and prevented by a prompt amputation of the affected limbs, and a consumption of them by fire. In that year, for the first time since I became a grower of trees, I found fire blight in my garden; and, as I had, within a few days previously, heard a paper read by Dr. Mosher before the Cincinnati Horticultural Society, describing minutely the action of these insects, (not the scolytus, however,) and the causes why they had failed to be discovered when sought for, I hastened to apply the knife as he had advised. When I came to amputate the limb, which had caught my eye from a long distance, I was surprised to find that the appearance did not accord with Dr. Mosher's description of the disease, which he represented as "first making its appearance at the extremity of a single branch when in full leaf, and from the young twigs of the present year's growth extending down the limb, to the older wood." In my case, the branch, a strong upright shoot, was six feet long, and about midway of its length for the space of 20 inches, the leaves were of a shining black color, and, during the same extent, the bark was shrivelled, while the extremity of the branch was still green and flourishing.

My examination of the tree did not enable me to discover the presence of any insects, but, assuming that they were certainly there, I cut off the entire limb close by the trunk of the tree, when I found the sap diseased below the bark. According to the books, I expected to find an exhausted state of the sap, not a vitiated redundancy. Two days after, I found the like mark of black leaves on another limb, when I cut into the base of all the limbs, and found the entire top, including the upper part of the trunk, in a diseased state, which I would describe as a putrid fermentation. Between the bark and the alburnum, the sap was profuse, viscid, and discolored, having the smell of a spoiled watermelon. My further observations led me to conclude that this sap dries up after a few days, leaving a brownish color on the surface of the alburnum, followed by a shrivelling of the bark. Mr. Downing

describes this shrivelling as preceding the vitiating of the sap, but I do not so find it. The effect produced is equivalent to that caused by an extensive removal of the bark, and a complete destruction of the tissue surrounding the wood. The circulation of the elaborated sap, in its descent from the leaves, seems to be thus prevented, and, as the branches become exhausted, the blackening of the leaves begins.

During that summer, (12 July,) I addressed a letter to the Cincinnati Horticultural Society, on the subject of blight, which they caused to be published in the *Western Farmer and Gardener* for August 1844, the essential parts of which were absorbed into Mr. Beecher's Essay of October, 1844, very much in the same way as the theory of that essay is thought to have been transferred into Mr. Downing's book on *Fruits* which appeared in the ensuing year. From that letter, I make the following extract:—

“I am thus minute in giving the appearance of things presented to my view, because, in my searches for descriptions of the disease called fire blight, I find none in the numerous journals I have, and that you may judge whether this be fire blight, as I suppose it is. If this be the disease described by Dr. Mosher, I doubt whether it is caused by the aphid he describes. I find, in my garden, many instances in which the green aphides have destroyed the terminal buds in the young growing shoots, so that the extremities of the shoots wither and die for several inches. The first good bud below, which would otherwise lie dormant, is pushed forward, and becomes the leading shoot. If the brown aphid actually kills the leaf by extracting its juices, would any worse effect ensue than if the leaves were cut off with a knife, which would not kill the limb, unless the succeeding crops of leaves were also removed? I suggest that the disease is, in fact, an infected state of the sap—a fermentation which I cannot think is caused by the brown aphid preying on the petioles of the leaves, and thus preventing a return of the fluids. We are not warranted in supposing that the aphid poisons the sap without some proof; and such a supposition admits that the sap is not all consumed by the insect; nor are we to assume that the sap is consumed by the aphid, for, if we examine sufficiently early, we shall find it abundant and spoiled—

smelling as I have described above. It is said in paragraphs which float through the newspapers, that the *scolytus pyri* works under the bark, and girdles the limb, and kills it. If the ringing thus made by the *scolytus* should be much more than an inch in width, the limb would probably die, and the leaves turn black; but, if the ring should be of less width, death would not ensue, but, on the contrary, an accelerated growth, and greater fruitfulness, as in common ringing with the knife.

"I offer no theories, but I suggest that diligent observation shall be directed to the state of the branches in early spring, when the juices are in active circulation, and the limbs have been subjected to the alternate action of sharp frost and hot sun. The first thing is to ascertain in what the disease consists. If it is a fermentation of the sap destroying the vital connection between the bark and the alburnum, making, in effect, an extensive girdling of the tree, or of the body of the limbs, we may then search for the cause. I begin to fear that the cause is beyond cure. The pear tree shows its foliage early; and the most thrifty and succulent kinds are apt to be attacked with the blight. The early activity of the fluids, and the redundancy of them, may be greater in some years than in others, and if, at such times, unusual and severe alternations of heat and cold supervene, the effect may be to produce death in the larger limbs, and even in the upper part of the trunks of young trees, vitiating the sap, and causing it to decay. Persons at all familiar with the process of deadening trees in clearing forest lands, know that, even when entirely girdled, (cut round with an axe,) some kinds will continue to grow and maintain their verdure the whole season; and some will even put forth leaves the second year, and then die. In the same way, the branches of the pear tree will expand their foliage, and make thrifty shoots, being a mere development of the buds by means of the juices laid up in the branches; and, when that supply is exhausted, they become blighted at the extremity, and so proceed downward until the marks of death extend to the lowest point of disease, just as the green trunks of young trees, driven into the ground as stakes, will throw out shoots which grow for several months, and then wither and dry up as if by blight."

What I have there suggested as occurring in the spring by sudden alternations of heat and cold, Mr. Beecher pronounces to be the result of autumnal cold. This may be so, but I am not satisfied that there is yet sufficient evidence to found a decision. I am now inclined to believe that it is done in the winter, because I have, within two years past, lost three pear trees and two cherry trees, where the dead part, or the girdling, was near the ground at about snow surface. So familiar now is my eye, with the effects on the foliage of this girdling, that, when I approach the tree to examine it, I can at once apply my knife to the dead spot. In the case of my pear trees, the girdling of dead bark did not extend more than five inches longitudinally, and, if the defect had been detected in early spring by an examination of the trunk, the trees might have been saved by grafting in pieces of new bark, or by uniting the live bark above and below the injury, by the insertion of scions, in the manner used for curing the injury caused by mice and other root cuts. The cherry trees I allude to put forth leaves, bloomed and set their fruit, when they faded and died precisely as pear trees do in blight, having sent down long strips of new wood which nearly overcame the injury, and, by some timely aid, would have done so. I have also, on one occasion, received trees from a nursery at a distance, which perished in the same season, after making an apparently successful growth for several months, which I found, on examination, had been killed near the ground the winter they stood in the row, or, at least, before they were sent to me. The case of the young trees at Buffalo, which were imported in March, and which died of blight the ensuing summer, was doubtless of this character. The same thing occurs very often in the quince: it has occurred with me in the English hawthorn trained as a standard, and, this year, I have observed it in the white currant, a whole row of which perished, the tops fading away with yellow leaves, and drying up with half-grown fruit upon them. Many persons may not so regard it, but it is the same effect produced by the same cause. The pear trees I have lost were one Napoleon, one Dearborn's Seedling, and one Madaleine, in each of which the injury was about the insertion of the graft into the stock.

I therefore regard the blight in pear trees as the result of cold at some unfavorable period during the season of rest, not yet clearly ascertained, but ascertained with sufficient certainty to be termed winter blight, the name given it by Mr. Beecher, and which I prefer to Mr. Downing's name of frozen sap blight. It is commonly called a disease, but a disease it is not, for a tree may lose a part of its head, and yet remain in full vigor. Cutting out the limbs does not promote restoration, and is only needful to remove a deformity, in case the tree has sufficient vitality remaining to spring anew. I have a neglected tree now on my farm, with its deadened head intermingled with the new branches which have sprung through it, and the old limbs are gradually falling without aid from man. Where the tree has this power of restoration from sufficient vitality remaining, any remedy applied to it will, for a considerable time, receive credit for making the cure. In this way, the hanging of old iron hoops on trees has been deemed very efficacious, on some theory of electric action, because the persons who practised had no fire blight.

A belief quite different from this is generally diffused now, by the wide circulation of Mr. Downing's popular treatise on Fruit Trees, the general excellence of which I am happy to admit. I will proceed to examine what he says, and give some of my reasons for not confiding in his conclusions.

Mr. Downing says, that, careful observation for several years, and repeated comparison of facts with accurate observers in various parts of the country, have led him to the following conclusions:—1st. That what is popularly called the pear blight is, in fact, two distinct diseases. 2d. That one of these is caused by an insect, and the other by sudden freezing and thawing of the sap in unfavorable autumns. The first, he therefore calls the *insect blight*, and the second the *frozen sap blight*.

His description of insect blight, and all he says in regard to it, is so literally copied from Mr. Lowell's letter, that I cannot regard him as writing from his own observations. I will therefore quote from Mr. Lowell, to whose authority you have referred as settling the question. That letter was written to Mr. T. G. Fessenden, who had sent to Mr. Lowell some branches of blighted pear tree, and also of quince, which

had been forwarded by Governor Lincoln. The letter was published in the *New England Farmer*, Vol. V. No. 1, on 28th July, 1826.

These are extracts :—

“In the latter end of June, or in July, one or more limbs of a tree in the fullest vigor, with fruit often upon them, and with shoots of the same year, perhaps 18 inches long, full of sap, suddenly appears blasted; in three days, the wood becomes dry and hard, and the fruit itself is desiccated, and so hard as to be cut with difficulty with a knife. The effect, in short, is precisely the same as if you had sawed off the limb and thrown it on the wood-pile, and so it ought to be, for, in effect, it has been sawed off by the teeth, or rather instruments, of a minute insect.

“The partial effect in a vigorous tree led me to suspect it to be the work of an insect. As I had detected the insect which is the enemy of the White Pine, and which often entirely destroys the beauty and value of that tree, in the forest, and had succeeded in extirpating it, or materially checking its depredations, in my own grounds, I was led to hope that the blast in the pear tree might also be occasioned by a wood-eating insect, and I was the more encouraged to hope this, since the case was so rare, as I may say, so entirely anomalous, of a tree being in a perishing state in some parts, and in high health in others.

“I cut off one of the diseased limbs, and spent many hours before I detected the cause of the evil. The insect is so small, its place of operation so concealed, (no external hole or swelling to lead you to suspect it,) that it requires much care to find it. Yet, when discovered, the injury was quite sufficient to produce all the effect; he had eaten from the root of a bud, behind which, *probably*, the egg was deposited, following the course of the eye of the bud into the pith which he had consumed, together with all the heart-wood. He had then gone into the chrysalis state, in the scene of his depredations, and was in the perfect state when I found him.

“I carried the branch and insect to Professor Peck, who soon ascertained that it was the perfect larva, of which the genus was known, although this species was new.” This was the *Scolytus Pyri*.

Now Mr. Lowell had somewhat predetermined the case, that the blight was caused by insects. So patient a search as he made could not fail to be rewarded with the discovery of insects. Forsyth had previously written that "in this disease, the perspiring matter is rendered thick and glutinous, and so becomes food for insects, which are always found in vast numbers on fruit trees that are affected with this kind of blight;" and he adds "these insects, however, are not the original cause, as some imagine, but the natural consequence of blight."

But does Mr. Lowell's description of the depredation by this insect,—the *Scolytus Pyri*,—warrant the conclusion, that it could cause the death of the limb? It does not warrant it, according to any known theory of vegetation in woody plants. The eating out of the pith, and all the heart-wood, would not kill the limb, for the sap would still ascend through the alburnum, though in diminished quantity. He did not state that the alburnum was also eaten through, and, of course, he did not mean to state it, for, if that were the case, the limb would break, and so be killed in a very simple manner. Mr. Downing says that the insect saws off "*a considerable portion* of the vessels, which convey the ascending sap, at the very period, when the rapid growth of the leaves calls for the largest supply of fluid from the roots; the growth and vitality of the branch are checked, and finally extinguished." To this, it may be replied, that the facts are furnished by conjecture. Mr. Lowell found the insect ready to emerge in July, and, being then perfect, it would *probably* proceed to deposit its eggs. Whether the larva eats its way down, in autumn, or in the ensuing spring, is not stated. If in autumn, and the excision was great enough to produce the effect contended for, the branch would not have grown at all; if it were in the spring, the process must have been gradual, and the external signs of it would be also gradual, by enfeebled growth. At that time also, the leaves are already grown, and a check in the supply would only hasten a ripening of the leaves, and diminish the quantity of the new wood deposited by the descending sap. The checking of the supply would not vitiate the condition of the eliminated sap in its descent from the leaves; and the sap is always found vitiated and discolored.

The diminished supply of sap would affect the whole limb above the point of attack, and would not cause a shrivelling of the bark, in girdling rings, or in patches, at the base of the limb, or midway of its length. If the bark and limb remain in good condition, as this hypothesis of insect blight concedes, the new wood would be formed continuously down, and a ready means furnished for the sap to ascend the next year, so as to produce restoration. It will always be found, that the new wood is abundantly deposited along the whole length of limb and trunk, above the point of injury, and many times vigorous efforts are visible, to throw down a new column over the injured part. Mr. Lowell's conclusion, as to the cause of blight, was not sound, and the authority of his great name has caused it to pass unquestioned.

Dr. Harris is also referred to as a concurring authority for the hypothesis of insect blight. His book on insects contains the following:—"From Mr. Peck's account, and from the subsequent communication by Mr. Lowell, in the 5th vol. of *New England Farmer*, it appears that the grub or larva of the insect, (*Scolytus Pyri*,) eats its way inward through the alburnum or sapwood, into the hardest part of the wood, beginning at the root of a bud, behind which, probably, the egg was deposited, following the course of the eye of the bud, towards the pith, around which it passes, and part of which it also consumes, thus forming, after passing through the alburnum, a circular burrow, or passage in the heart-wood, contiguous to the pith which it surrounds. By this means, the central vessels, which convey the ascending sap, are divided, and the circulation cut off. This takes place when the increasing heat of the atmosphere, producing a greater transpiration from the leaves, renders a large and continued flow of sap necessary to supply the evaporation. For the want of this, or from some other unexplained cause, the whole of the limb, above the seat of the insect's, operations, suddenly withers and perishes, during the intense heat of mid-summer," (p. 75). Those who quote him omit to give Dr. Harris's cautious qualification, that, for want of sap, or from some other unexplained cause, the limb perishes. He evidently had an involuntary doubt of the theory he copied.

I may also add, that the blight of 1826 caused many pub-

lications in the *New England Farmer*, and Mr. Fessenden, in a review of facts, declared that "further investigation into the cause and consequence of the malady in pear trees, led him to doubt the correctness of his first formed opinion." "We now doubt," said he, "whether the *Scolytus Pyri* can be the perpetrator of *all* the mischief which we were at first disposed to attribute to his agency."

It might be supposed, from Mr. Downing's description of insect blight, that he means to be understood, that there is a blight in pear trees, unaccompanied by a vitiated state of the sap. But I apprehend that this is an error.

FROZEN SAP BLIGHT, OR WINTER BLIGHT.—In what I consider the uncertainty of the mode in which this injury happens, I prefer, as I have already stated, Mr. Beecher's term of winter blight. The name, frozen sap blight, would somewhat import, that mere intensity of cold, and a freezing of the sap, would prove destructive to the trees. The conjecture is, that the freezing ruptures the sap vessels, and destroys their capacity for transmitting the sap. The nature of the injury could doubtless be solved by the aid of microscopic observations, which could be readily invited, and made efficient, by the Smithsonian Institute. All gardeners, at least, will unite in testifying to them, that knowledge on this subject is worthy of extension and diffusion among men.

Mr. Downing states, very confidently, that the sap becomes *poisoned*, and, by dilution with other descending sap, is carried down, infecting the tree below, and part carried inwards towards the pith, poisoning the alburnum. Is this the result of observation, or is it conjecture? I apprehend it is the latter. From such observations as I have made, perhaps too limited, the conclusion I formed was, that the sap, after fermentation, was no longer transmissible, and soon dried up, after which, the bark shrivelled, and producing, in fact, a decortication. If the sap is poisoned and carried inwards, it would also ascend through the alburnum, and infect the top. But this is not the case: grafts taken from a blighted top, will grow into healthy branches, as I have seen, and as Mr. Lazell, of Columbus, also testifies. The injury may be regarded as entirely local. I have seen a single fruit-spur blighted on the side of a healthy limb, and, on seizing it, to pull it away, the

bark, for an inch in diameter, came with it,—the space below showing the discolored sap, and the injury confined to that limb.

I should be very glad to find, that my explanation of this matter is not the true one. For, when I became satisfied that fire blight was not caused by an insect, and that it was not a disease, but the result of cold, acting on the fluids of the tree, I began to despair of the orchard I had so fondly commenced, with a fine selection. For I can scarcely hope, that, at intervals of fifteen or twenty years, seasons may occur so unfavorable, as to carry off our trees, despite of every care we may use. But we may, nevertheless, do something, by selection of soil, and planting in the lightest soils that the nature of each kind will bear; and still more may be done, by seeking hardy kinds that make slow growth, and always ripen their wood; and by growing our thrifty kinds on slow-growing stocks.

Urbana, Ohio, December 5, 1848.

We can assure Mr. James, to whom we feel much indebted for the above interesting account of his experience, with the destructive blight of the *West*, that it is *entirely distinct* from the insect blight, as described by Mr. Lowell, and Gov. Lincoln; but, as we have no room now to discuss the matter, we propose to take it up in another number. We will then endeavor, with the aid of Dr. Harris, to show the undoubted character of the Insect Blight.—*Ed.*

ART. III. *Disease in Apples.* By N. GOODSSELL, Esq., Rochester, N. Y.

THE disease in potatoes has, for the last few years, been a prolific source of discussion in our agricultural and horticultural journals. As that subject has become rather stale of late, not that the importance of the subject has decreased, but that those discussions have not produced any definite conclusion either as to the cause of the disease, or an acknowledged preventive, I would invite the attention of your pomological con-

tributors to the disease in apples. I fear that this delicious fruit is to be subject to a disease, the cause of which may, perhaps, be as difficult of discovery or prevention as that which has attacked the potato.

During the last year, I noticed several varieties of apples, decayed before their usual time, and not in the usual manner, while the skin remained sound, the pulp beneath became discolored, or of a lightish brown, and, in color, taste, and smell, what has been termed the "bitter rot," which has long affected many varieties at the core. This season, I have found a greater proportion of such fruit as have ripened diseased than I saw last year. The variety which has been cultivated for the last fifty years through western New York as the Holland Pippin, (not the Holland Pippin of Downing,) and which we consider one of our finest varieties for late fall, and early winter use, has been materially injured by this disease. This variety has, for many years, been injured more or less by black spots upon the skin, which spots have much the same smell and taste that the discolored pulp has, from which circumstance I fear that it originates from the same cause, or one very similar.

This discoloring, in many specimens which I have noticed, appears to radiate from the calyx, or the line between that and the core, and the core was also affected with the bitter rot. The *Æsopus Spitzenberg*, *Baldwin*, and *Newtown Pippin* have been, for many years, more or less subject to the bitter rot in some localities, but they are of firmer flesh than the *Holland Pippin*; it remains to be seen whether they will be liable to this disease.

Rochester, November 25th, 1848.

ART. IV. *Descriptions and Engravings of Six Varieties of Apples.* By T. S. HUMRICKHOUSE, Coshocton, Ohio.

THE following descriptions and figures of six well-known apples have been prepared for the Magazine, with a view to aid, as far as in my power, in rescuing them from a portion

of the confusion in which their names are now involved. A further detection of synonyms, in the case of some of them, and even of the true names which must take precedence of all others, is doubtless to be expected. In the mean time, inasmuch as their propagation under some or all of their appellatives will be continued and extended, it is well that all which has been ascertained concerning them should be given to the public.

1. **KEISER.**

Seek-No-Further,
Red Seek-No-Further, } of Western collections.

This is a very beautiful apple, common in northern and central Ohio. The size is medium, some specimens approaching to large: the form regular, flattened, ribbed: color, bright red, marbled and striped with darker red: skin, thin and

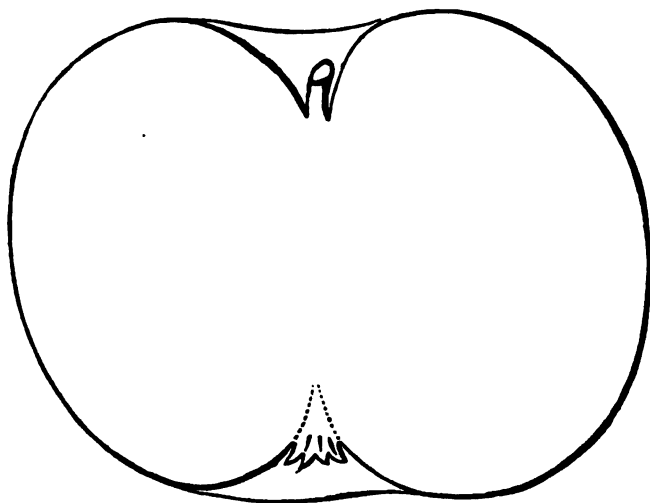


Fig. 1. Keiser Apple.

glossy: calyx, open in a ribbed basin: stem, short, a little fleshy, in a narrow russeted cavity: flesh, white, very juicy, saccharine, spicy, and high-flavored, even excelling the green Newtown Pippin, which it much resembles in this respect;

solid also to the touch, but tender when it comes to be eaten : the seeds are light-colored, brown on one side, and white on the other : season, December to April. A first-rate fruit in all respects.

2. WESTFIELD SEEK-NO-FURTHER. *Fruits and Fruit Trees of America.*

Seek-No-Further,	} of some collections.
Russet Seek-No-Further,	
Marietta Seek-No-Further.	

Fruits and Fruit Trees of America.

This is one of the apples brought out by the emigrants of the "Ohio Company," shortly after they made their first settlement at the mouth of the Muskingum. The size is a little below medium : form, regular, ovate : color, dull red next the sun, striped, yellowish green in the shade, obscurely dotted,

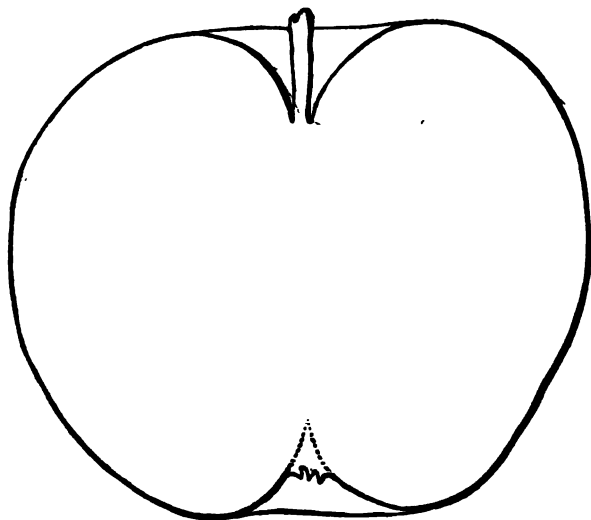


Fig. 2. *Westfield Seek-No-Further Apple.*

russeted about the stalk, and frequently over a greater part of the surface, which is then rough : stem, slender, of medium length : calyx, open, in a narrow shallow basin : flesh, pale yellow, very tender and juicy, with a rich saccharine flavor, a little astringent : season, November to March. A very pro-

ductive variety, deservedly ranked with the first-rate apples, yet hardly equal to the Keiser.

3. WELLS APPLE.

Striped R. I. Greening,
Cheat,
English Rambo, of some.

This is a common and highly esteemed winter fruit in the southeastern parts of Ohio. The form is irregular, flattened, ribbed: size, medium to large: color, striped with red on a pale yellow or greenish ground, with numerous rough gray specks, and much russeted about the stalk: calyx, closed, in a rather deep angular basin: stem, slender, in a deep cavity,

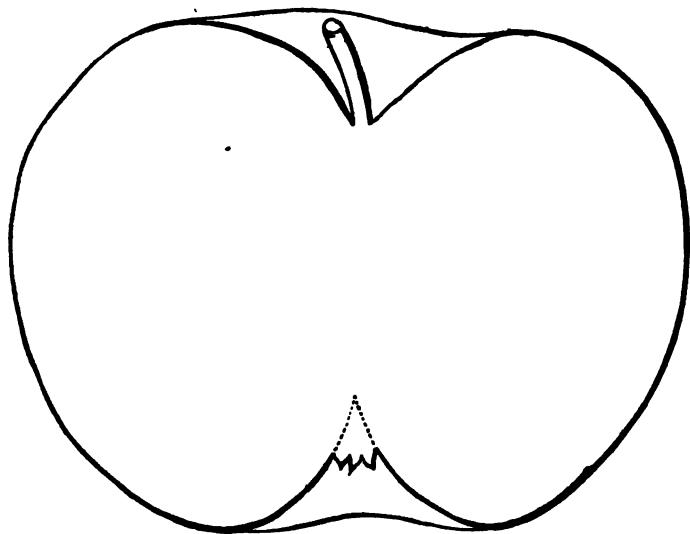


Fig. 3. Wells Apple.

standing out nearly even with the base: flesh, moderately juicy, nearly sweet, and of very pleasant flavor, resembling walnuts: season, December to March. The tree is a thrifty grower in the nursery: in the orchard, it is thinly supplied with branches, which are very long and stout, with but few side shoots, and full of stout spurs on which the fruit is borne frequently weighing the branches to the ground.

4. RAMBO. *Coze's View, &c.*

Striped Rambo,
Romanite,
Seek-No-Further, }
Bread and Cheese Apple, } of New Jersey, according to the
 } *Fruits and Fruit Trees of America.*

This is more generally cultivated than any other apple in Ohio. Fruit of medium size, on rich land often large: the form varies, sometimes oblong, oftener flat, always plump and fair: color, when fully ripe, pale yellow in the shade, streaked with red, the red predominating in the sun: the skin is thick, and speckled with rough gray dots: stem, three eighths or half an inch long: calyx, open, in a broad basin: flesh, very

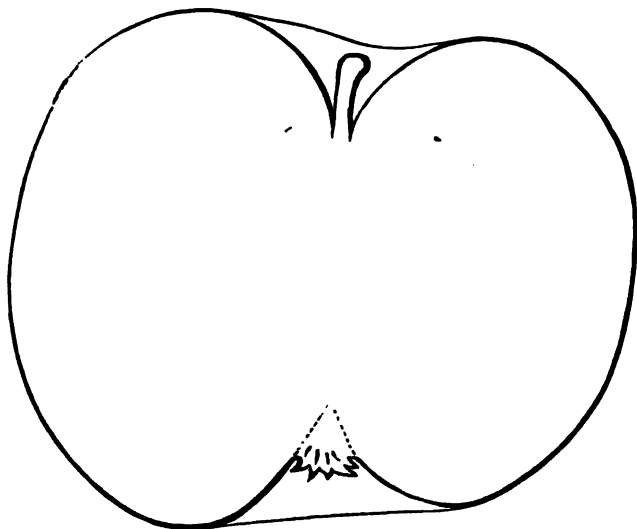


Fig. 4. Rambo Apple.

tender, juicy, with a rich, perfumed, subacid flavor: gets mellow in about two weeks after being gathered, and remains in prime perfection for about two months; it then becomes rather mealy. Though properly a November apple, it is often kept till March. The tree is a most thrifty and beautiful grower. The wood is porous and brittle, hence often breaking down with the weight of the fruit. It is exceedingly productive.

5. RED RAMBO.

Rambo, of Western collections.

This is another very distinct variety in common cultivation here under the name of "Rambo," with which it has been confounded. Some, indeed, have supposed it to be the same, and attribute the difference to climate or locality: but I have it growing side by side with the other in three orchards situated some miles apart, two of them upon upland, and one in the valley, and it maintains invariably its distinct character. Being unable, as yet, to identify it with any other kind, I propose to call this the Red Rambo, until its true name, if it have one, be discovered.

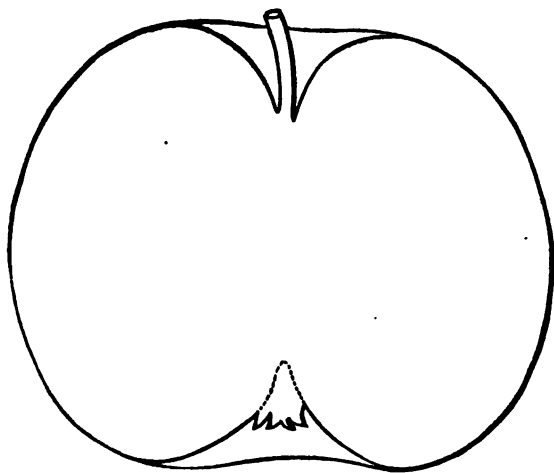


Fig. 5. Red Rambo Apple.

The fruit is usually of medium size, sometimes a little less: the form, round and regular, plump and fair, now and then a little flattened: color, a beautiful bright red, evenly laid on, and finely softened and shaded to pink or greenish yellow on the side least exposed to the sun; never striped; russeted in the cavity of the stalk; speckled with large rough gray dots, and covered with a rich bloom: stem, of medium length, slender, and curved: flesh, very tender, with a pleasant, sub-acid, nearly sweet flavor. In its flavor and season of matu-

rity, and in the productiveness of the tree and its habit of growth, this very nearly resembles the other Rambo.

6. ROMANITE.

Red Romanite,
Roman Knight.

This apple is extensively cultivated upon the Monongahela and Ohio rivers for the New Orleans and West India markets. It is common throughout the whole West. Size, below medium, or small: form, round, often plaited about the eye: color, red; those grown in the shaded parts of the tree striped with red upon a ground green at first, but pale yellow in the spring: skin, smooth and glossy, sometimes with warts upon it: stem, slender, short, in a russeted cavity: calyx, open;

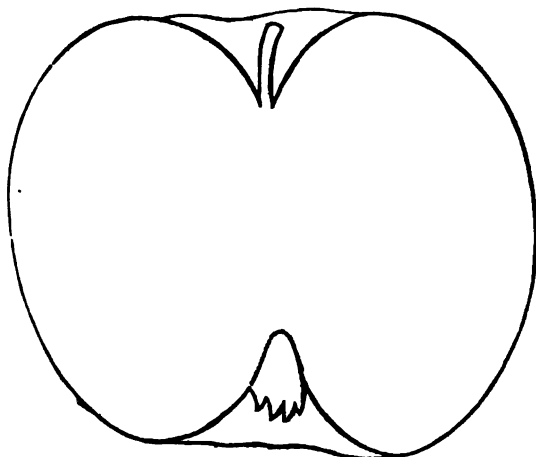


Fig. 6. Romanite Apple.

flesh, sweetish, juicy, of an indigestible quality and texture, without being tough: season, January to July.

This apple does not cook well. It is only fit for the desert and for cider,—its chief value being for the latter, and for exportation. It will bear more frost without injury, and keep longer and sounder, than any other apple cultivated at the West. On the Monongahela, they are barrelled and loaded into flat-boats in the fall, where they remain all winter,

with only straw next the sides of the boats, and on the top; and, when the ice breaks up in the spring, they are thus taken, without being disturbed, to New Orleans, where, on opening them, they come out as fresh and sound as the day they were gathered. The trees are very productive. In the nursery, their growth is slender; but, in the orchard, they form fine large trees, with thrifty bushy heads. There are as many as four varieties of this name with which I am acquainted—distinct, yet differing but little from each other—of which the one above described is the best. The Cart-house, or Gilpin, is said to be synonymous with one of them; and, in some nurseries, has been confounded with this, or rather, this has been propagated for it. The gray Romanite, which is a rather richer fruit, yellower in the flesh, not so well covered with red, more distinctly striped upon a pale yellow ground, more oblong in form, and narrowing slightly to the eye, more warty, and not quite so good a keeper, may possibly be identical with the Gilpin.

Coshocton, November 20th, 1848.

ART. V. *On the Culture of the Calceolaria.* By JAMES KENNEDY, Gardener to S. T. Jones, Esq., Staten Island, N. Y.

(*Continued* from Vol. XIV., p. 494.)

As my remarks of last month, (on raising seedling calceolarias,) seems to have merited a place in your Magazine, I now continue the subject, and come to the

PROPAGATION BY CUTTINGS.

The herbaceous species and varieties should be placed, early in February, in a mild heat, say from 60° to 65°, to start them into growth, and, when advanced four or five leaves, take a sharp knife and separate each shoot carefully; trim off the two lower leaves, and insert them singly in thumb pots, well drained, and filled with fine light sandy soil; plunge the pots, up to the rims, in sawdust, or some such material,

where, if kept regularly, but moderately watered, they will soon fill the pots with roots, and require to be shifted into a larger size: when they receive their third shift, they may be removed into the greenhouse, placed near the glass, and be watered, twice a week, with clear liquid manure-water, in a tepid state.

Beautiful as are a great many of the herbaceous class of this very interesting tribe, and desirable as they are, to every lover of flowers, yet, as an ornament for decorating the stage of a greenhouse, the shrubby species and varieties are, in my opinion, much preferable, and for more than one reason. In the first place, they are generally much hardier, and more free of flowering; and, secondly, they are more easily managed by amateurs who cannot always possess the assistance of an experienced or skilful gardener. Another advantage is, that, in raising them from cuttings in the fall, and through the dark days of winter, they are much less liable to damp off, than the herbaceous varieties. Some may object, perhaps, that they are not so rich in variety of coloring; but I can assure all such, that I have seen shrubby varieties, that, for brilliancy of coloring, elegance of shape, and neatness of foliage, no plants of any class could surpass them.

COMPOST.

I now come to the soil or compost, most suitable for these plants, and I have found the following will grow and flower them, the best of any I have tried:—To one barrowful of fibrous loam, taken from an old pasture, not more than three or four inches thick, add one barrowful of leaf mould, one fourth of a barrow of well decomposed cow manure, and one fourth of a barrow of heath soil, with sufficient fine charcoal to render the whole free and porous. The whole should be chopped and turned over a few times, that it may be thoroughly mixed, but not sifted, and all the grubs, slugs, and wireworms, carefully sought for and destroyed, every time it is turned. It ought to be kept in a dry place, and used rather dry than otherwise.

WINTER MANAGEMENT.

All the stock plants intended to be preserved through the winter, must be protected from frost in flued pits, or a cool greenhouse. At the time of removal into winter quarters, every dead leaf must be picked off, the pots washed clean, the moss cleared off the surface, and a little fresh earth put on. All straggling branches should be trimmed and tied up, and a good syringing given to the shrubby species especially. As, at the same time, most of the inmates of the greenhouse will be taken in, it is desirable to fill the house with tobacco smoke, two or three times, which will generally be found to destroy all the green fly, or aphides on the plants, at this season. I may here remark, that there is nothing so destructive to the herbaceous species, as the green fly. I have known hundreds of plants lost by their pernicious attacks; particular care must therefore be taken, at all times of the year, against this pest. In arranging these plants in the houses, the herbaceous species should be placed nearest the glass, be sparingly watered, and have abundance of air admitted on all favorable days. The shrubby species will require rather more water, but the treatment is the same, as to giving air. The cooler these plants are kept during the dead season of winter, the better specimens will they make for ornamenting the greenhouse, when introduced into a growing heat, that is, providing they do not get injured by frost.

When fine specimens are desired, the plants may have a shift into larger pots, in February. In performing this operation, a little of the top and side soil may be rubbed off with the hand. The pots must be thoroughly drained, and a little moss or rough soil put over the drainage; pot them moderately firm, and remove them into a pit or greenhouse, with a temperature ranging from 50° to 55°, placing them close to the glass; they may then have sufficient water to wet the soil through, and be kept as close to the glass as possible, for a few days, which will encourage them to make fresh roots, after which, air must be admitted at every favorable opportunity, being careful, however, to avoid cutting winds, which are very injurious to the plants. Water when it is found ne-

cessary, but not, however, till it is really necessary; for it is as great an error to give too much water, as too little; and I always fancy it safest to err on the dry side. Avoid, as much as possible, wetting the leaves, as they are very liable to damp off, but they may have a slight shower from the syringe, when closing up the house, on fine evenings. As they advance in growth, let the shoots be neatly tied out to stakes; but none of them must project above the plants, as, to the eye of those who have good taste, they appear unsightly. By following the above hints, and giving an occasional watering, of clear liquid manure, the cultivator will be abundantly rewarded for all the trouble and anxiety bestowed on them.

SUMMER MANAGEMENT.

Presuming that the plants are coming into flower, a good taste is requisite in arranging them, so as to produce the best effect on the stage. In general, it may be said, that striking contrasts should be avoided; as, for instance, a bright yellow and a brilliant scarlet should not be directly in contact; but intermediate shades should be placed between them, so as gradually to blend and form a soft harmonious whole. Some means should be adopted to keep flies, bees, &c., from the blooms, for, if not attended to, they very soon destroy them. The cheapest and most suitable material I know of, would be some common gauze, which, I am told, is very cheap. I would also recommend the lights to be white-washed, which acts as a shade for the blooms, and considerably prolongs their season of flowering. As soon as done blooming, the plants may be trimmed down, and cuttings put in from the choice varieties, under a hand-glass, in a shady place; when well rooted, they may be potted off singly, into small pots, the soil being light and sandy. The old plants may be shook out, the roots reduced, and potted off into as small pots as possible, put into a frame, where they can be protected from heavy rains, by putting on the lights when found necessary; here they may remain, till removed to winter quarters, taking care to water, fumigate, and protect from heavy rains, when necessary; the latter must be constantly kept in view, and,

whether you can detect aphides or not, the house should be fumigated with tobacco once before the flowers expand.

Slaten Island, N. Y. November, 1848.

ART. VI. *The Guava (Psidium Cattleyanum); its Cultivation and Management.* By the EDITOR.

SOME years since, after reading an account of Cattley's Guava, (*Psidium Cattleyanum*,) in the *Transactions* of the London Horticultural Society, accompanied with a beautiful representation of the fruit, we were so much pleased with its appearance that we made great exertions to procure a plant. Fortunate, as we thought we were, in finding one, we cultivated it carefully for a long time, and began to despair of its ever giving a crop of fruit, when, to our astonishment, it proved to be the old yellow-fruited species, *P. pyriferum*, unworthy a place, unless in some very large and extensive collection. Subsequently, we endeavored to procure the true *P. Cattleyanum* from various sources, but never were enabled to get the true one, or even the sight of a plant.

In the autumn of 1844, as we were looking through the hothouses in the Edinburgh Botanic Garden, with the late Mr. McNab, the curator, whose death has just been announced, we were struck with the appearance of a plant of this Guava laden with fruit. Mr. McNab gave us half a dozen of them, and, on our return home, we had the pleasure of raising six or eight plants, which grew finely, and produced some fruit in the fall of 1846, though only about fifteen inches high. In 1847, they bore again; and the past autumn so abundantly that, from one plant, we gathered about four dozen of the fruit.

The *Psidium Cattleyanum* is not only one of the richest dessert fruits, but is one of the most ornamental plants in the greenhouse. The growth is vigorous, regular, and upright, with slightly pendulous branches, and with large, deep green, glossy leaves, nearly as handsome as the camellia. The an-

nexed engraving, (*fig. 7.*) represents a plant well grown, about three feet high, and four years old.



Fig. 7. The Guava.

each, may be readily estimated. *Fig. 8* represents the size and shape of a well-grown Guava taken from one of our plants.

Under judicious treatment, and with the aid of a hothouse, the fruit may be had nearly all winter. Like the fig, the plants bear two crops; one in the autumn, and one about Christmas. We have, at the present time, (Dec. 20th,) plants loaded with fruit nearly or quite ripe, and have already gathered a number. In the cool temperature of the greenhouse, the fruit does not ripen off, and acquire that great richness which it will in the hothouse; but the autumn crop is equally abundant and excellent.



Fig. 8. Fruit of the Guava.

RAISING YOUNG PLANTS.

Plants may be raised from seeds, or cuttings: by the former method they are slower in coming on, though they eventually

make fine plants. The speediest mode is by cuttings, which may be rooted in light sandy soil, in a little bottom heat, and afterwards potted off into small pots, in the compost in which they are to grow.

GENERAL MANAGEMENT.

Supposing the young plants to have been raised as just directed, they should be potted off into four inch pots; when the pots are filled with roots, they should have a shift into the next size, and, if exceedingly vigorous, they may have a third shift the first year; but if not, omit it till the second year, when the same treatment should be continued; shifting into a larger size as soon as the pots are filled with roots. Early in the spring of the third year, they may be placed in large pots or tubs, in which they may remain to fruit, for four or five years, having occasional top dressings. Pots or tubs, holding a half-bushel of soil, are of ample size, as the plants bear more abundantly to have the roots somewhat confined. The compost should be about two thirds good rich loamy soil, and one third well decomposed manure, with a very small quantity of sand. Water liberally, when the plants are in full growth, and occasionally with liquid manure: syringe the foliage freely during the summer.

The plants may remain in the greenhouse during the summer: and the higher temperature will give a richer flavor to the fruit. Where there is the convenience of the hothouse, the late crop may be ripened off in all the perfection of the early one. But even in the greenhouse they ripen sufficiently, to acquire the peculiar flavor for which the Guava is so celebrated. After the fruit is gathered, the plants may be allowed to rest: placing them in a cool part of the house, and watering rather sparingly, until the season when they show signs of growing again. They should then be removed to a warm and sunny situation, and have more liberal supplies of water; when the fruit is well set, syringe freely at all times, and pursue the same routine of treatment as in the previous year.

A plant of such easy management, producing such luscious fruit, and, at the same time, so highly ornamental, should be found in every good collection.

ART. VII. *Floricultural and Botanical Notices of New and Beautiful Plants figured in Foreign Periodicals ; with Descriptions of those recently introduced to, or originated in, American Gardens.*

IN our annual summary of the progress of horticulture for the past year, in a preceding page, we have given the names of some of the most important plants of recent introduction. We now continue our notices of plants figured in the foreign periodicals, with a brief account of those more particularly worthy of being added to our collections.

Our object has always been to make our Magazine a complete record of every new flower, as well as every new fruit, tree, or vegetable, of the least interest whatever. We have had complaints that our Floricultural Notices have been of but little value only to the botanist. We cannot agree with those who view them in this light. If our pages are looked over for the last *fourteen years*, it will be seen that every beautiful or desirable plant which our collections contain, has been described or noticed in the Magazine; and every lover of flowers, (and we know we have many such among our readers,) would deeply feel the loss of these notices, which contain information only to be procured at great cost by the purchase of the elegant works in which they are figured. It will, therefore, be our object to continue our Floricultural Notices as we have heretofore done.

93. *ÆSCHYNA'NTHUS STAMI'NEA* Blum. Long-stamened *Æschynanthus*. (*Gesneracææ*.) Java.

A stove plant; growing a foot high; with crimson flowers; appearing in summer; increased by cuttings; grown in heath soil and leaf mould. *Flore des Serres*, pl. 358. 1848

Another of the very splendid *Æschynanthuses* from Java, where it was found by Mr. Lobb, the indefatigable collector. It is fully equal to any of the species heretofore introduced, having ample foliage, and axillary groups of the richest velvety crimson flowers, with very long projecting stamens, from whence its specific name. Mr. Lobb found it in the humid forests of the mountains of Java. It will be a fine acquisition to our stove plants. (*Flore des Serres*, June.)

94. *FUCHSIA SPECTABILIS* Hook. Elegant Fuchsia. (*Æno-therdææ*.) Quito.

A greenhouse plant; growing four feet high; with rosy crimson flowers; appearing all summer; increased by cuttings; grown in rich light soil. *Flore des Serres*, pl. 359. 1848.

In our last volume, (XIV. p. 311,) we noticed the introduction of this magnificent species into English collections. We now have before us a most finished representation of the flowers, fully characterizing it as the "most beautiful of all the fuchsias yet known." Mr. Lobb, in a letter to Mr. Vetch, describes it as the "loveliest of the lovely." The plant has a strong and vigorous habit, with large and superb foliage, and the flowers, which are of a brilliant rosy crimson, open flat, and are greatly heightened by a prominent white stigma. It is one of the greatest acquisitions that has ever been made to this fine tribe, and must become a great favorite. We hope it will speedily be introduced. (*Flore des Serres*, June.)

95. *CASSELLIA INTEGRIFOLIA* Nees. Entire-leaved Casselia, (*Verbenææ*.) Brazil.

A stove plant; growing two feet high; with lilac flowers; appearing in spring; increased by cuttings; grown in heath soil, and leaf mould. *Flore des Serres*, pl. 361, 1848.

A pretty little plant, from the forests of Brazil, with an abundance of small lilac flowers, elegantly striped with purple. The foliage is handsome, and it is abundantly supplied with flowers, which appear in terminal clusters. (*Flore des Serres*, June.)

96. *ROSA BROWNII* Spring. Mr. Brown's Rose. (*Rosææ*.) Nepaul.

A half hardy plant; growing ten feet high; with white flowers; appearing in summer; increased by cuttings; grown in rich soil. *Flore des Serres*, pl. 366, 1848.

This species was introduced long since, but is very little known in European collections. It has immensely large clusters of single white flowers, of an agreeable odor. Mr. Van Houtte states that it braves the rigors of a Belgian winter, and, with the ordinary protection, it would undoubtedly be hardy in our climate. Its growth is similar to the Lady Banks, making very long slender shoots, and suitable for covering an arbor or trellis. It comes from the Nepaul mountains. (*Flore des Serres*, July.)

97. CASTILLEJA LITHOSPERMOIDES *H. B.* Lithospermum-like
Castilleja. (*Schrophulariaceæ.*) Mexico.

A greenhouse plant; growing eighteen inches high; with scarlet flowers; appearing in summer; increased by seeds; grown in light rich soil. *Flore des Serres*, pl. 371, 1848.

A very pretty greenhouse plant, suitable for bedding out, like the antirrhinums, and others of the same natural family. This Castilleja has an erect stem, terminated with a spike of beautiful orange scarlet flowers. The plants are easily raised from the seeds, which are abundantly produced. (*Flore des Serres*, July.)

MISCELLANEOUS INTELLIGENCE.

ART. I. General Notices.

Pelargoniums.—During the past week, I received a box of pelargoniums from that indefatigable raiser of new varieties, Mr. Beck, of Isleworth, and was highly gratified at the masterly way in which they were packed up. Although the plants had been a whole day incarcerated in very narrow limits, when I released them from bondage every leaf assumed its natural attitude, and looked as fresh as if the box had never taken the place of the greenhouse. By means of little wicker baskets, made in the neighborhood of Isleworth, the plants travel without the least injury, and the mode of conveyance should be adopted by nurserymen. The extra expense and trouble will be more than compensated for by the satisfaction given to the purchaser.

Having set this little collection of flowers at liberty, I looked at them with great interest, and began to inquire in what way I could best keep them in health during the winter. They had evidently enjoyed every advantage, and exhibited robust health; the fresh green of the foliage, and its freedom from spots indicating the former possession of proper light and temperature. Not possessing a greenhouse myself, I knew that the change would be felt by my newly acquired plants, unless I considered their wants, and employed a little petting, to accustom them to their more humble home. Two plans suggested themselves; one, to keep them in a pit out of doors, the other, to place them in the window of the sitting-room. A pit is a most eligible place for pelargoniums, if properly defended from frosts. I have kept a large number in health during a long winter in a garden frame, protected as described in former papers. In long frosts, no air must be admitted, except in the middle of the day, if the atmosphere is not lower than the freezing point: but, on all occasions, when there is no danger of frosts attacking the plants, air and light must be plentifully supplied.

But this little collection of Beck's pelargoniums I intend to attend to myself in-doors, and several particulars will require to be observed. First, no more water must ever be given than is requisite to keep them in health, and, in cold weather, a very small portion indeed will fulfil that condition. Secondly, they must be kept as close to the glass as possible, and be turned round frequently to preserve uniformity of growth. Thirdly, as the atmosphere of a sitting-room is dry, and unlike that of the open air or a well-regulated greenhouse, the window must be opened frequently. Fourthly, to prevent the dust which is unavoidable in window-gardening from stopping up the pores of the leaves, the plants should be put out of doors in genial and mild rains. By observing these rules, I hope to find my plants in good order when the spring comes round, when I shall put them into blooming pots, and bring them on in a frame. Perhaps this relation of my own intended mode of procedure may be useful to some amateurs who are now in possession of young pelargoniums, in circumstances similar to my own.

The intrinsic beauties of this favorite plant, both as to its leaves and flowers, will prevent it ever being thrown aside, and the kindness with which it yields new varieties to the art of the florist will continue to invest it with fresh charms. Amateurs who practise hybridizing should study deeply the principles of the process, that every defect may be gradually obliterated, and the excellent qualities scattered among various kinds be collected together in one. The masterpieces of Grecian sculpture are said to be not fac-similes, or the representation of any figure in *rerum naturâ*, but a combination of all the graces which the artist could conceive of. It results from this, that forms as beautiful as came from those ancient chisels can never be found among men. But what human nature cannot yield, Flora grants to her votaries. We may imagine perfection of form and color in a flower, and, by patient skill, may at last produce one which shall quite equal the beau-ideal.—(*Gard. Chron.*, 1848, p. 732.)

ART. II. Domestic Notices.

Notes on Pears.—At page 6, of your Magazine for 1848, you gave us an interesting list of the newly introduced pears, that had fruited around Boston, in 1847, and proved desirable; and also a list of some, that further experience had confirmed their previous high character. The past has been a great pear season, and I hope, in the next number, you will give a list of all the new ones that have proved valuable, and also a confirmatory list of those that have proved worthy of cultivation on further trial. The Rostiezer pear, which you figure so prettily in your *Fruits of America*, has borne here the past four years, and has proved fine every year; it grows fast, and unites well on the quince for two years certain; and also Dear-

born's Seedling, which ripens at the same time. But the Seckel, and Flemish Beauty, grow well only for *one year*, with me, and die off, or stop growing, the second year. The Surpasse Virgalieu, (not Virgoulouse, as you have it,) is a fine pear, when the *season suits it*, say one out of three. I am aching to get hold of the seventh number of your *Fruits of America*. I hope to see our favorite Seckel occupy one of its pages, in some future number.—*Yours, respectfully, J. R. C., Mabbettville, N. Y., Dec. 28, 1848.*

[Our correspondent, who we are happy to hear from, will find the lists of fruits he alludes to, in our first article. The seventh number of the *Fruits of America* is nearly ready, and the succeeding numbers will regularly follow. Delays, beyond our control, as well as circumstances which we could not foresee, in getting up so expensive and laborious a work, have prevented us from issuing them at the intervals originally intended; but we believe we have now so far overcome all difficulties, that hereafter the numbers will appear every two months.—*Ed.*]

The Felch Apple.—I send you herewith, a few samples of the fruit, known here as the Felch apple; it is a superior winter fruit, and, if known under any other name, elsewhere, we should be glad to learn it. It is believed by many, to have originated in this county; but I doubt its being a new seedling,—can you throw any light upon it?—*Yours, S. L. Goodale, Saco, Dec. 14, 1848.*

[We can inform our friend, Mr. Goodale, that his Felch apples were some of the finest specimens of the *Baldwin*, we have lately seen,—which he may truly say, is a “superior winter apple.” How an apple so well known as the Baldwin, should be supposed a seedling, originating in Maine, we are at a loss to imagine. This is, however, only one of the many instances, showing the importance of a comparison of fruits, from various sections of the country, in order to arrive at a correct and uniform nomenclature.—*Ed.*]

The Best four varieties of Strawberries.—Our old correspondent, Mr. Longworth, of Cincinnati, Ohio, was greatly surprised that we should state that there were only three varieties of strawberries really worthy of cultivation, viz.:—Hovey's Seedling, the Boston Pine, and Early Virginia, (or Large Early Scarlet.) We see, by a notice in the *American Agriculturist*, for December, that we are not alone in our opinion; an experienced fruit-grower writes the editor, “that, after trying *thirty* of the best and most popular modern varieties of strawberries, he has come to the conclusion, that but *four* are worth cultivating on the light sandy lands of Monmouth county, New Jersey. These are Hovey's Seedling, the Boston Pine, Large Early Scarlet, and Crimson Cone, or Scotch Pine.”

Another cultivator of the strawberry, Mr. C. H. Starr, of Groton, Connecticut, states the result of his experience with Hovey's Seedling, as follows:—The soil was a moist loam, half an acre in extent, well pulverized by ploughing, and manured at the rate of 20 cords to an acre of seaweed and fish. The variety was Hovey's Seedling, with a few English plants as fructifiers, and were set in April, in rows, three feet apart. The product from the half acre, under cultivation last season, was 2000 quarts of fruit, some of which measured $4\frac{1}{2}$ inches in circumference.

This is at the rate of 4000 quarts to the acre, which, at Boston prices, would net, after all expenses of picking and selling, 20 cents per box, or \$1600 per acre. The writer sets down the total expense of labor per year at \$180. This certainly would afford a handsome profit, far exceeding that of any other variety we have yet seen. It is somewhat different from the statement of a writer at Poughkeepsie, that Hovey's Seedling was "far behind all others," in productiveness, not bearing *one fourth* as much as the Early Scarlet. Taking this writer's estimate, he ought to get 16,000 quarts of the Early Scarlet to an acre, and nobody believes this, any more than they do his preceding statement. The fact is, that the writer did not intend to state the truth, or else he cultivates, as a great many do in Western New York, Mr. Downing's Hovey's Seedling, a staminate variety, which he sent to the Massachusetts Horticultural Society, as the *true* Hovey's Seedling, but which proved a worthless sort. What confirms this, is the statement by the writer, that the "vexed strawberry question," is unknown in his garden.—*Ed.*

Mr. P. Barry, of the firm of Ellwanger, Barry & Rowe, nurserymen, Rochester, N. Y., sailed for England in the early part of December last. He intends making a visit of about three months, and will return in March. The object of his tour is to visit the gardens and nurseries of England, Scotland, France and Belgium, and to select all the new and choice kinds of fruits, worthy of introduction to our gardens.—*Ed.*

ART. III. *New Haven County Horticultural Society.*

THE annual exhibition of this Society was held on the 27th of September last, at New Haven, and a report of the same has been published, a copy of which, we have before us, containing an account of the flowers, fruits, and vegetables exhibited, with the premiums awarded, and the list of officers for the year 1849. We give a brief abstract of the report:—

PLANTS.—The principal contributions of plants came from E. Watkins, who sent *Ipomœa Learti*, *Salvia splendens* major, *Pentas carnea*, &c. Messrs. H. Whitney, E. Mugford, John Moneghan, and others, also sent small collections.

FRUITS.—The exhibition of pears was very good. Dr. V. M. Dow had, among sixteen sorts, the Howell, which we shall describe in our next. Col. J. A. Totten exhibited the Vicomte de Spoelberch, Howell, Edward's Elizabeth, McLaughlin, and seventeen other sorts. Miss H. Edwards exhibited the following, all of them, we believe, seedlings of Gov. Edwards:—Gerry, Tyler, Clay, Van Buren, Spice, Cantelope, Jackson, Seedling St. Germain, Frances, Baking, Black Hawk, Calhoun, Elizabeth, John, Dallas, Humbug, and Harriet. S. D. Pardee exhibited, among others, Van Mons Leon le Clerc. There were also about twenty other contributors of small collections.

44 *Twenty-first Annual Fair of the American Institute.*

VEGETABLES.—A great display of these was made from about twenty exhibitors. Mr. A. Holford, gardener to A. C. Read, displayed upwards of fifty varieties of various sorts. Mr. J. Harvey also exhibited about the same number; and the committee awarded the first premium of \$10, to Mr. Harvey, for the largest and best collection. Mr. Holford the second of \$8.

For the best and largest collection of pears, the premium of \$2 was awarded to Col. Totten. And, for the next best collection, \$1, to V. M. Dow. A discretionary premium of \$2, was awarded to Miss Edwards, for the best collection of native pears. For the best half dozen "fall eating," \$3, for the Duchesse d'Angouleme, to V. M. Dow; and for the best specimen, \$1, for the Louise Bonne de Jersey, to C. Robinson.

For the best floral design, the premium of \$5 was awarded to E. Watkins. For the best bouquet, to Mrs. Geo. Gabriel, \$4. For the best collection of dahlias, to C. Robinson, \$3. Numerous other premiums were awarded, for which we have not room.

The officers of the Society for 1849, are as follows:—

Dr. A. S. Munson, *President*. C. Robinson, and V. M. Dow, *Vice Presidents*. Geo. Gabriel, *Rec. Secretary*. E. H. Bishop, *Cor. Secretary*. S. D. Pardee, *Treasurer*.

ART. IV. *Twenty-first Annual Fair of the American Institute.*

THE Horticultural Report of the 21st Annual Fair of the American Institute has been published, containing an account of the exhibitions of flowers, fruits and vegetables, with the award of premiums. The prefatory remarks to the report, by Messrs. Bridgman & Mead, speak very favorably of the exhibition, as compared with previous ones, and show the increasing interest which is felt in this department of the fair. The flowers, owing to the very hot and dry weather, though fine, were not shown in such perfection, as last year. But of fruits, "at no former fair of the American Institute, was there ever seen such a splendid variety as was exhibited on the present occasion." The display of pears, "far exceeded any thing of the kind ever seen here before. The number of varieties was very large, including all the choicest kinds in cultivation, and, among them, many of luscious appearance, which was far from being deceptive." The committee also remark, in regard to the pear, that "We are still far behind our sister states, in the cultivation of this, and some other superior fruits."

FLOWERS: The silver medal, for the best twenty-four dahlias, was awarded to J. M. Thorburn & Co., New York.

FRUITS: The silver medal, for fruits, was awarded to McIntosh & Co., of Cleaveland, Ohio, who exhibited fifty-one varieties of apples, and for one of pears.

Messrs. Walker, and Hovey & Co., of Boston, Ellwanger, Barry & Rowe, of Rochester, T. Hogg & Son, N. Y., and R. L. Colt, Patterson, N. J., were the principal exhibitors of large quantities of fruit.

VEGETABLES: The silver medal was awarded to E. W. Fisk, Brooklyn, for the choicest assortment of vegetables.

We congratulate the Institute on the fine exhibition, and only hope that the interest in the Horticultural department may be further extended, and that, another year, a much finer display may be confidently anticipated.—*(Report.)*

ART. V. *Massachusetts Horticultural Society.*

Saturday, December 2d, 1848.—An adjourned meeting of the Society was held to-day,—the President in the chair.

The Executive Committee, in accordance with the duty enjoined on them, recommended that the sum of *twelve hundred and fifty dollars* be appropriated by the Society, for premiums for the year 1849,—and that the income derived from the Appleton, Lowell, Lyman, and Bradlee funds constitute a part of the amount, — and that the apportionment to the several committees, be the same as for the present year.

As the fund given for special prizes had all been awarded, the committee suggested, that ten sets of Colman's *European Agriculture*, and the medals remaining on hand, (after the distribution of those already awarded,) be given as premiums or gratuities, for such objects as are worthy of distinction, and not provided for in the prize list.

Adjourned two weeks, to December 16th.

Exhibited.—**FRUITS:** From E. M. Richards, fine Baldwin and Roxbury Russet apples. From J. L. L. F. Warren, Hubbardston Nonsuch, Roxbury Russet, Baldwin, R. I. Greening; the specimens were all very fine. From Otis Johnson, R. I. Greening, extra fine, every specimen perfect, and well colored. From John Washburn, apples, Tolman's Sweeting, fine, Hubbardston Nonsuch, fine. From Mr. Kingsley, Kalamazoo, Michigan, by Messrs. Winships, the following apples:—Twenty Ounce, Black apple, Cabasha, Fall Pippin, Winter Pippin, Golden Russet, Denophan, Bois, Golden Pippin, Steele's Red Winter, Flushing Spitzenberg, Sweet Bell, Winter Pippin, Roxbury Russet, Black Gilliflower, Spice Pippin, Roberts's Sweet, Bellflower Yellow, Winter Greening, Jonathan; the specimens were all of extra size. Among these specimens, the Steele's Red Winter was the *Baldwin*; the Winter Greening, the *R. I. Greening*; and the Roberts Sweet, the Hubbardston Nonsuch.

December 9th. Exhibited.—**FRUITS:** From the President of the Society, excellent specimens of Beurré d'Aremberg, Glout Morceau, Beurré l'iel, Inconnue Van Mons, and Easter Beurré pears. From John Gordon, very splendid specimens of Easter Beurré pears. From S. Walker, Le Curé, Beurré Ranco, Passe Colmar, and Caen du France pears; Rhode Island Greening, Baldwin, and White Seek-no-Further apples. From A. Dexter, Baldwin, R. I. Greening, Roxbury Russet, and Lady apples. From B. V.

French, White Seek-No-Further, and Conway apples. From O. Johnson, Roxbury Russet apples, and Easter Beurré pears. From J. Owen, Newtown Pippin, and other apples. From Hovey & Co., Knight's Monarch, and Glout Morceau pears.

The committee tasted several of the specimens, and pronounced the Easter Beurré and Glout Morceau pears fine; the Inconnue Van Mons, as fine flavored, and promising well. Among the apples, the White Seek-No-Further, fine.

December 16th.—An adjourned meeting of the Society was held to-day, the President in the chair.

The President read a letter from M. Tougard, President of the Central Society of Horticulture, of Rouen, France; the letter was accompanied with a catalogue of his nursery, and the publications of the society over which he presides. The thanks of the Society were voted to M. Tougard, and the Corresponding Secretary directed to transmit a copy of the vote, with all the transactions of the Society.

A letter was received from F. R. Elliott, Cleaveland, Ohio, presenting the Society with seven new native kinds of cherry trees; the thanks of the Society were voted, and the trees placed in the care of the President, for the Society's use.

Mr. S. Walker presented copies of the 21st Annual Fair of the American Institute, which were laid on the table for distribution, and the thanks of the Society voted for the same.

Adjourned one week, to December 23d.

Exhibited.—**FRUITS:** From Josiah Lovett, 2d, fine Glout Morceau pears. From J. S. Cabot, Beurré d'Aremberg, and Winter Nelis, fine specimens; also Cross, Beurré Diel, Chaumontelle, Columbia, and Brande's St. Germain, the latter new, and of similar quality to the Dix. From E. M. Richards, Echasserie pears.

December 23d.—An adjourned meeting of the Society was held to-day,—the President in the chair.

The committee of publication presented their report,—they state, that there were some outstanding bills, which may have been omitted, and it was voted that the Treasurer be authorized to pay all outstanding bills, presented by the committee.

The President and Treasurer of the Society, J. Stickney, F. W. Maondry, and O. Johnson, were appointed a committee to settle with the Treasurer of Mount Auburn Cemetery.

The Corresponding Secretary was requested to forward to the Horticultural and Agricultural Societies of the country, copies of the proceedings of the 20th Annual Exhibition of the Society.

The chairman of the committee on flowers and vegetables presented their reports, awarding premiums for 1848, which were accepted, and the thanks of the Society voted, for not exceeding the appropriation.

Adjourned for one week to December 30th.

Exhibited.—**FRUITS:** From B. V. French, apples, Baldwin, White Seek-No-Further, Conway, Canada Reinette, R. I. Greening, Pennock's Red Winter, Lady Apple, and Roxbury Russet. From S. Downer, Jr., pears,

Fortunée, Easter Beurré, Bellissime d'hiver. From Josiah Lovett, 2d, pears, a seedling; also a watermelon, in fine keeping. From W. B. Kingsbury, pears for a name.

December 30th.—An adjourned meeting of the Society was held to-day,—the President in the chair. [The proceedings will be given in our next.]

HORTICULTURAL MEMORANDA

FOR JANUARY.

FRUIT DEPARTMENT.

Grape vines, at this season, require little or no care except in the hot-house: here, where forcing is about commencing, or already begun, great care is necessary, at this early and severe period of the season, to guard against injury to the vines from the effect of sudden changes of temperature. In very early houses, the vines will now probably be breaking; but, except where there is a desire to have them as early as possible, the present month is soon enough to bring them forward. The border should be covered with five or six inches of manure, and, if convenient, a few inches of coarse strawy litter or leaves upon that, in order to keep severe frosts from penetrating to the soil. The vines may then be brought up on the wires, and have a syringing every morning and evening. The temperature for the first fortnight should be from 45 to 50 degrees, and be increased the second, from 50 to 55 degrees. A too violent heat at first is injurious. Vines in pots may now be brought into the greenhouse where there is room, and where early fruit is an object.

Fig trees in pots may now be repotted if they need it, previous to bringing them into the house to grow. If they do not need shifting, it will be only necessary to give them a good top-dressing.

Peach trees in pots may be brought into the greenhouse for early fruiting.

Strawberries in pots may be brought into the greenhouse or hothouse, and, if placed on a warm shelf near the glass, will give a good crop.

Scions of fruit trees may be cut now, and be safely kept in a cool cellar in earth.

FLOWER DEPARTMENT.

Camellias will now be flowering freely, and will require good supplies of water. Some of the plants, when the house is kept warm, will soon begin to grow, and those that do should have an occasional watering with liquid guano. Inarching and grafting may be commenced now. Cuttings, put in last summer, may now be potted off. Attend to the impregnation of the flowers if seeds are wanted.

Japan lilies will soon begin to grow, and will require attention the latter part of the month. Such as show signs of growing at that time should be potted as we directed in our last volume, (p. 34.) The others may remain till February. Seeds may be planted now.

Verlenas will now require a shift: such as were put in thickly in small pots should now be potted off singly, and others, already in a small size, should have a shift into four inch pots, or, if fine large specimens are desired, into six inch pots.

Azaleas will now begin to grow, and should be rather more liberally watered.

Achimenes of the different kinds should now be brought forward for early blooming, placing a few of the bulbs in the warmest part of the house.

Gluzinias may also now be potted for early blooming, giving the same treatment as the achimenes.

Dahlias may now be brought forward, if early flowering plants are desired, or if they are wanted for propagation. Pot the roots, and place them in a warm situation, and, early in February, they will begin to make young shoots.

Oxalis Bowiei, and *hirta*, now done flowering, may be placed away on a dry shelf, and gradually dried off.

Cinerarias should now be shifted, if fine large plants are wanted.

Roses will now begin to show an abundance of flower-buds, and will need some attention. Fumigate often to destroy the green fly, and keep down the red spider with sulphur. Water occasionally with liquid manure, and syringe freely in all good weather over the foliage. Young cuttings, potted off in October, should now have a shift into four inch pots.

Calceolarias should now be repotted.

Schizanthuses will need another shift into large pots before the roots get matted together.

Pelargoniums will now require considerable attention, especially those intended for specimen plants, or for exhibition. If they have not had their last shift into the pots in which they are to remain, this should now be attended to. When this is done, keep the branches tied down horizontally, and nip off the points of all the strong growing shoots. Place the plants as near the glass as convenient, on a cool airy part of the stage, and do not crowd them in among other plants, but let them stand so that there is a free circulation of air on all sides. Nothing is more important than this. Water moderately, and occasionally syringe, but only in very fine weather. The object is now to encourage a good growth at the root, while the top is kept from advancing as little as possible. If the temperature is too high, the plants will run up and be in bloom in March.

Fuchsias may now be repotted, headed in, and placed in a favorable situation to grow. Now is the time to propagate a new stock.

Pansy seed may now be sown in boxes for producing plants to turn out in May.

Heaths will now be growing, and from January to May is the best period for propagating a stock. Keep the old plants liberally watered and syringed.

Greenhouse plants of all kinds require attention now. Some will need potting, while others should only be top-dressed. Stake, tie up, and clean the plants at all leisure times.

THE MAGAZINE OF HORTICULTURE.

FEBRUARY, 1849.

ORIGINAL COMMUNICATIONS.

ART. I. *Report on the Fruit and Kitchen Gardens, near Paris, from observations made during a Visit in the Spring of 1847.* By MR. R. THOMPSON, Superintendent of the Orchard and Kitchen Garden, of the London Horticultural Society.

WE have already given our notes on some of the Parisian gardens, in the results of our Foreign tour, (Vols. XI. and XII.,) but as our time did not permit us to make that extended observation, which we could have wished, we now have the pleasure of presenting the views of Mr. Thompson, of the Horticultural Society's garden, who was especially despatched to Paris, for the purpose of noting the state of gardening in the vicinity of that city. The Society, with a view to further "increase the efficacy of the Fruit department, thought it advisable to send Mr. Thompson to inspect the best examples of French winter pruning, and to collect such information as the very important, but generally unattractive season of early spring would furnish." Mr. Thompson reached Rouen on the first of March, 1847, and remained at Paris for nearly three weeks, in which time, he visited all the principal horticultural exhibitions, as far as Fontainebleau. In this service, he was greatly assisted by Mr. Rauch, a German gentleman, residing in Paris, and familiar with all that relates to its gardens. Mr. Thompson was directed to keep full notes of all that he found worthy of notice, and, in the paper named at the head of this article, he has given a detailed, interesting, and very instructive account of his travels. It appeared in

the *Journal* of the London Horticultural Society for 1837, Vol. II. p. 195.

It is almost unnecessary for us to say, that Mr. Thompson's article is by far the most valuable, that has appeared in the Society's *Journal*; and we propose to make full extracts of such parts of it, as can be applied to our own practice of gardening. His remarks are the result of actual observation of some of the best examples of Horticultural science in France; and are worth a volume of mere theory and general views, which form the basis of much that is now written upon the subject. The French gardeners understand the art of budding, grafting, pruning and training, thoroughly, and the study of their methods of practice, is important to all who are engaged in the cultivation of fruit trees, or who are desirous of possessing the symmetrically formed specimens, of which such accurate copies are figured in the French Treatises upon the subject.

Mr. Thompson went from London to Southampton, on the 27th of February, and sailed the same evening for Havre, where he arrived the next morning. Here there was but little to see: the weather was quite cold, clear and frosty, with keen North East wind. On the 1st of March he went from Havre to Rouen, by diligence. Here he visited the Botanic Garden, which occupies upwards of twenty acres, and which has been under the direction of M. Du Breuil, Senior, for forty years. The arboricultural and fruit tree department is superintended by his son, M. A. Du Breuil, Professor of Agriculture, Arboriculture, &c. Lectures are given by Prof. Du Breuil, on budding, grafting, pruning, training, &c., and, in short, upon every thing connected with the management of fruit trees. There are specimens of trees to illustrate both good and bad practice in these matters. The trees are neatly pruned and trained, and exhibit almost perfect examples of the various modes of training, figured in Prof. Du Breuil's *Cours Elementaire Théorique et Pratique d'Arboriculture*.

PROF. DU BREUIL'S MODE OF TRAINING PEACH TREES.

"Professor Du Breuil has commenced the training of some trees, in which two main branches are laid off according to

the Montreuil mode, as are likewise the branches from the under side of these; but the branches for filling the centre are reversed till they are brought to an angle of 45° , thus forming right angles with the main branches from which they spring. By this mode, there are no upright branches, and consequently no unequal competition between such and those in a depressed position, requiring the frequent application of the knife, to maintain the balance of force in the flow of sap. That mode of training, must be good in principle, which gives a position to the branches that will ensure an equal distribution of sap, with the least possible interference by the knife. In the mode under consideration, the branches occupying the centre have an elevation of 45° , whilst those produced on the under side of the main branches have only 20° ; but the latter are allowed two years' growth, before the former are allowed to spring; besides, the branches from the upper side, although they have a greater elevation, yet in them the sap has to turn at an angle of 90° from its direction in the main branches; but from these main branches, the lower diverge at an angle of not more than 35° . The sap will accordingly pass more readily into these, than into the others, where it has to turn at a right angle. The trees under training, according to this mode, are not so far advanced as to furnish absolute proof of its merits, but it will doubtless answer. The same principles were adopted many years ago, with trees that had proved unmanagable under the Montreuil system, in a rich border in the Society's Garden, at Chiswick.

"Amongst various other forms for training the peach, some trees were set off with two stems, like the letter U, from the outsides of which, branches are trained horizontally. In one of these, the two lowest horizontals are continuations of the two main stems; and from the upper side of these, about 18 inches apart, shoots are trained upright and parallel, from which all the other horizontal branches proceed; also, from both sides of these horizontals, bearing shoots, about 18 inches apart, are trained with an inclination forwards. By this mode, it is sometimes difficult to maintain an equal degree of vigor in both sides of the tree.

"Another tree is intended to be trained with a wavy central stem. When in the state of a young shoot, this stem is bent first to the left, then to the right; and where it commen-

ces to turn from left to right, a shoot is encouraged on the outside of the bend, and trained straight to the left, in a direction a little above the horizontal. Where the stem shoot is again turned from right to left, another branch is extended to the right; and so branches are intended to proceed alternately, on either side, from every outward bend of the stem, till the wall is covered.

"Trees were trained in the Society's Garden, with wavy stems, according to the systems of Hitt and of Hayward; the former having strictly horizontal branches from the bends, with perpendicular bearing shoots; the latter with gently curved branches, with the bearing shoots inclined. But each tree, in both systems, had two straight naked stems, elevated at an angle of 45° , and $4\frac{1}{2}$ feet in length, before they took an upright wavy direction. These naked stems invariably became scorched on the sides exposed to the sun, and the upper portions of the bends were also more or less affected in the same way. Professor Du Breuil's mode is unquestionably far preferable to either of the above, inasmuch as the tree has only a single stem, from which the wall is furnished from bottom to top, instead of being unfurnished to the height of 4 feet, above which, the naked stems only begin to branch, according to the systems of Hitt and Hayward. In Professor Du Breuil's tree, there are no long naked stems exposed to the scorching influence of the sun's rays, and even the bends can be protected by foliage. On the whole, this mode is considered highly deserving of trial in Britain."

Mr. Thompson left Rouen for Paris, on the 2d of March; the weather was still so cold, the ground could not be worked; the vineyards were not yet pruned or dressed. He immediately proceeded to the Jardin des Plantes, where, after seeing the plant-houses, aboretum, &c., he inspected the fruit tree department, under the superintendence of M. L. P. Cappe.

In our last volume, (XIV. p. 295,) we have already copied Mr. Thompson's remarks on M. Cappe's system of summer pruning, and, referring the reader to that, we proceed to notice

MR. CAPPE'S MODE OF WINTER-PRUNING PYRAMIDAL PEAR TREES.

"The winter-pruning of pyramid pear trees is almost reduced to a mechanical operation, when the summer man-

agement has been properly attended to. Keeping the tapering form in view, it consists in cutting each shoot a little shorter than the one immediately below it, taking care to cut to a bud situated on the side of the shoot towards that direction in which it would be most desirable the prolongation should proceed. Shoots that are too vigorous for the rest, are not cut to a bud on the upper side, but to one situated below.

"Some trees appeared to be much admired by every one, on account of the introduction of another feature of regularity in training, besides that of a merely tapering contour. These had what is called a *tutor*,—that is, a straight perpendicular stake, to which the stem is trained; and from the top of this stake, five wires are stretched to as many equidistant points, on a hoop near the ground, or in one instance to five short stakes. These wires represent the angles of a five-sided pyramid—a pyramid apparently fifteen feet high, on a pentagonal base. Branches are trained directly from the stem to each of the wires. In order to convey some idea of these trees, one may imagine five upright trellises or screens projecting from a central upright, forming the partitions of as many equal recesses, widening outwards. The branches form such partitions with good effect as regards regularity; and, when they become ornamented with leaves and fruit, the whole must prove an interesting sight. The trees had a fruitful appearance.

"Instead of the branches radiating from the stem, in five directions, it might be found more convenient to train them out to four points, say east, west, north, and south. It may, however, be observed, that, in the pear tree, five buds form a spiral, once round the shoot or stem; or, in other words, supposing the leading shoot to be perpendicular, every fifth, tenth, fifteenth, &c., bud will be in the same vertical plane. Therefore, if the number of buds between one branch, and that next above it, be always a multiple of five, the branches, radiating in each of the five directions, will originate exactly above each other.

"The trees above described, had been formerly grown as pyramids, in the usual way, with branches extending promiscuously; but M. Cappe is of opinion, that, by commencing with a young tree, the tutor and wires may be dispensed with.

In exposed situations, the wires form excellent stays; and where they are employed, a comparatively slender stake will be sufficient."

M. DUPUY JAMIN'S SYSTEM OF IRRIGATING GARDENS.

"Parallel to a long central walk in this nursery, a small zinc pipe was supported by stakes, about two feet above the surface of the ground. Such an aqueduct could be formed at a trifling expense, compared with the saving it might be made the means of effecting in a dry season. It is certainly an object of pecuniary importance, to supersede the labor of several men, by merely turning a cock, and allowing the water to run quietly along to reservoirs, at a distance from the source, instead of wheeling it in tubs, and frequently tearing up the walks in the course of the proceeding. It may be said, that the pipe might as well be laid in the ground, as the water would rise to a level; but in that case, the pipe would only be available in one fixed direction, instead of being easily moved to where it may be requisite. Such pipes might be made, at no great expense, in convenient lengths, of about ten feet, with flexible India rubber connexions. The lengths could be tied together in bundles, when not wanted; and, when required, they could be readily extended in any direction."

M. HARDY'S LECTURES ON THE MANAGEMENT OF FRUIT TREES.

On the 5th of March, Mr. Thompson visited the *Gardens of the Luxembourg*, to hear a lecture on pruning, by M. Hardy, at 8 A. M., in the open ground. "M. Hardy delivers two lectures a week, free to the public, on pruning, grafting, planting, and, in short, every thing connected with the management of fruit trees, finishing the course in the end of April. He has generally from 300 to 400 hearers, among whom, are young men employed in the Luxembourg Gardens, the Jardin des Plantes, and other establishments, by permission of the respective directors. In various instances, the young men afterwards make up for the time they are thus absent. But the greater number of those who attend, are amateurs. M. Hardy also lectures, in the afternoon, to gentlemen wishing to

obtain a knowledge of the management of fruit trees. The admittance for each person to any one of these is, however, 3 francs. From fifteen to twenty gentlemen usually attend the afternoon lectures.

"In his first lecture, I was informed, M. Hardy explained the physiology of the tree, the action of the sap, the names of the different parts of the tree; the stem, branches, and the technical distinctions of the latter, such as *Rameaux à bois*, *Rameaux à fruit*, *Brindilles*, *Lambourdes*: branches for wood; branches for fruit; fruit-bearing twigs and spurs. The term *brindille*, requires, however, a little more explanation:—Pear trees, recently raised from seeds, are usually armed with thorns, a provision for the defence of the young plants; but naturally, as the trees get older, and more especially when influenced by cultivation, the thorns are produced less abundantly, and by degrees they disappear. The thorns latterly produced, lose their original character. Instead of being naked, one, two, or more, very small buds may be observed upon them; but still they are pointed, and, this being the case, they yet retain the characteristic of a thorn, and cannot elongate in the following season. Some after-productions may, however, be seen to terminate in a small bud, and the substance throughout, is much softer, but still harder than the regular shoots on other parts of the tree. These growths may be then looked upon as thorns modified; they become capable of elongation, and are what the French term *brindilles*. They proceed at right angles from the branches producing them; and are not inclined to grow upright. They sometimes bear fruit before the other branches; but when the trees get into full bearing, these *brindilles* are not required.

"M. Hardy concluded, by showing how to handle and properly apply the knife.

"The second lecture, he took a maiden plant, and explained how it ought to be dealt with, according to the modes of training, for which it might be intended; then a plant two years old; another three, and so on.

"For the third lecture, at which I was present, he had a pear tree, intended for a pyramid, planted in the centre of a circle, formed by a rope, about 50 feet in diameter, outside of which the people stood to hear the explanations, and see the

mode of operation. In the tree selected for illustration, M. Hardy pointed out faults, from not pinching the shoots in the previous summer; and some others in consequence of former winter pruning. The reasons for cutting each branch as he did were successively given, as well as an explanation of the bad effects of cutting otherwise; and ultimately the pruning of the tree was completed in good style. We had an opportunity of closely examining it after the lecture was over.

"We then inspected the different quarters planted with pyramid pear and apple trees, and those containing cherry and plum trees. As there is no wall for peach trees, these are trained against a trellis, backed with straw mats; and, with this assistance, the fruit ripens perfectly well.

"All the quarters containing fruit trees are surrounded with borders, planted with cherry, plum, and apricot trees, as standards; and some with excellent effect are trained in form of a *Vase*, or *en Gobelet*, dwarf, or with a stem 5 feet or rather more in height. The head is formed hollow, in shape like a goblet, the shoots being annually tied to hoops of wood, adapted to the circumference required to give the desired form. Two hoops are sufficient, the two-year old wood being tied to one; and the equidistant regulation of the one-year old shoots, is effected upon the other. As the *vase* or *goblet* widens, of course hoops of greater circuit must be prepared, either of new materials, or by introducing an additional piece. In some instances, the hoops are formed of round, apparently $\frac{1}{4}$ inch, iron rods; but wood is preferable to iron, for vegetation in contact with the latter, is apt to be injuriously affected, by the rapidity with which it heats and cools. Shoots are apt to spring up in the centre of the goblet; but they must be pinched in summer; and so all other irregularities of growth appear likewise to have been. The form is very ornamental; it can be produced at little expense; and the trees were well furnished with fruit buds. Suppose a tree to have 6 shoots, let them be tied at equal distances to a hoop placed horizontally, and then shortened a few inches above it, or so as to leave them a foot or more in length. From each of these, two shoots may be trained to the outside of a somewhat wider hoop, in the following season; and thus, by annually introducing hoops of a width proportionately corresponding with

the respective diameters of the vase intended to be imitated, the desired form will ultimately be produced. The head of the tree will be completely balanced; and the branches will be more nearly equidistant, than they could be by any other mode of training as a standard. I should prefer wooden hoops to iron ones. If weak, or if two or more pieces must be employed for the hoop, its circular form may be preserved by two small rods, secured diametrically across it."

THE COLLECTION OF FRUITS IN THE GARDEN OF THE LUXEMBOURG.

Mr. Thompson has added the following account of the celebrated collection of fruit trees, in this garden:—

"It may be interesting to mention, that, in the Gardens of the Luxembourg, and Jardin des Plantes, the best collection of fruit trees in France, that of the Chartreux, was preserved; and also that, from these gardens, the sorts were obtained by the Society, when the collection was forming for the garden at Chiswick. This was the best source whence the identical varieties described by the celebrated Duhamel, could be obtained, as appears by a communication from M. Thouin, appended to a list of grafts, sent to the Society in 1820, and of which the following is a translation:—

" 'Various causes having prevented my worthy colleague, M. Bosc, from taking off the grafts requested for the Horticultural Society of London, from the nursery of the Luxembourg, he begged of me to make the collection. This I undertook with the greatest pleasure, as, in obliging my friend, I may also render a useful service to an honorable body to which I am proud to belong.

" 'The Society may be assured, that the names of the grafts precisely correspond with the varieties described by Duhamel (*Traité des Arbres Fruitiers*, Paris, 1768). The following are the means which were employed, by which we are able to accomplish so important an object.

" 'In 1793, when the question was agitated of suppressing the monasteries, and placing their property at the disposal of the State, foreseeing the destruction of the garden of the Chartreux at Paris, and anxious to preserve to horticulture the originals on which Duhamel had established his nomenclature

ture, I begged and obtained permission from the minister Roland, to remove whatever trees I pleased from the complete collection which that garden contained. They were labelled according to the Catalogue of the Chartreux, and transplanted in the garden of the Museum, where they were arranged in such a way as to form a school for the instruction of nurserymen, gardeners, country gentlemen, and even botanists and physiologists.

“The garden of the Chartreux was soon after destroyed; there remained no vestige of it; and it was not till ten or twelve years after, that it was re-established in the Luxembourg, by rooted plants or grafts taken from our school of the Museum, in the Jardin des Plantes.

“On the formation of that school, I invited Christopher Hervy, gardener to the Chartreux, a man well informed on the subject of fruit trees, and who supplied Duhamel with a great portion of his nomenclature, to make a general examination at the periods of the flowering and fruiting of the trees, to prove the identity of the names of our varieties. This labor was pursued during the first six years of our plantation in the school, in such a way, as to correct errors which might have crept in. There now, therefore, remains no doubt on this head. But this is not the case with many of the varieties obtained from various parts of France, and more particularly from abroad, since the publication of Duhamel's work. The nomenclature of these is vague; in many cases, the sorts have proved synonymous with those already known; and it is necessary to wait till the trees have fruited, in order that they may be correctly named.’

“It thus appears, that the collection of the Chartreux, made during a period of 150 years, was preserved by the exertions of M. Thouin; and of that collection, the Horticultural Society of London received, with the above communication, grafts of 48 varieties of plums, 99 of apples, and 145 of pears. Peach and other kinds of fruit trees, were subsequently forwarded from the same source.”

COMPARATIVE MERITS OF COPPER AND IRON PIPES.

Mr. Thompson visited the seat of Baron James Rothschild, where there are extensive ranges of forcing-houses,

heated by hot water, in copper pipes, and he gives the following views of the French gardeners, of the comparative merits of copper and iron pipes. They fully coincide with our own :—

“The boilers, as well as the pipes, for this purpose, are made of copper. This substance appears to be generally preferred to iron, for the hot water mode of heating, about Paris, even by market gardeners. On the score of economy, they say, that, although it is somewhat dearer than iron in the first instance, yet it is ultimately cheaper, inasmuch as it wastes but little, and it is always saleable. As regards adaptation, they can obtain heat much quicker from it than from iron. This property is more especially an advantage in such a climate as that of Paris, where the general clearness of the air admits of a large amount of sun-heat being suddenly accumulated; and consequently, the quicker the heating apparatus parts with its heat, the better. On the other hand, in proportion nearly as the clearness of the air favors a sudden rise of temperature by sun-heat, so does it facilitate the rapid escape of heat by radiation, as soon as the sun’s influence is withdrawn; and hence a promptly heating apparatus is again the most eligible.”

ESPALIER FRUIT TREES AT VERSAILLES.

“The quarters are surrounded by espaliers six feet high. Wooden posts are driven into the ground, as supports for the trellising, and the whole has a neat appearance. By the side of the central walk, in this part of the gardens, the espalier is partly constructed of iron, strong bars forming arches from post to post, surmounted by an iron top-rail. This contrasts strangely with the simple upright and horizontal lines which the adjoining espaliers exhibit.

“In some of the quarters inside these six feet high espaliers, there are very dwarf ones, about sixteen feet apart, the spaces between them being cropped with vegetables. These dwarf espaliers are scarcely four feet high; they are formed by posts driven into the ground, and to these, four small wooden rails are fixed horizontally. Pear and apple trees were trained against them. Some of the trees appeared to be fifteen or twenty years old.

"What is done at Versailles as regards espalier training might be very advantageously imitated in other large gardens, and, for small gardens, no mode is so proper. If the trees be well managed, they will almost support themselves, by the time the first, and not expensive, woodwork decays. They occupy comparatively little space; some crops can be grown almost close to them; and their appearance, loaded as they ought to be with fruit, cannot certainly be deemed unsightly.

"We observed some pear trees trained on espaliers, horizontally, it may be said, but with an important peculiarity. On remarking them we were informed that their branches were originally trained from the stem at an angle of 45° of elevation; but that they were afterwards brought to a horizontal position, excepting the parts near the stem, which still retained almost the original position. Although lowering the branches was, I believe, an after-thought as regards these trees, yet I believe a better principle than that of allowing the branches to ascend at the above angle for a little way from the stem, could not be adopted."

The orange trees here, Mr. Thompson states, are magnificent. The number is 1500; some are 300 years old, with stems thirty-nine inches in circumference; one has the inscription, "*Sémé en, 1421,*" and must therefore be 426 years old.

ADVANTAGES OF CAST IRON PIPES FOR FLUES.

In the market garden of M. Truffant, at Versailles, Mr. Thompson notices a mode of heating houses by means of iron pipes for flues:—

"In two compartments, where bottom heat for the pine apples is supplied by means of hot water, top heat is obtained from a six inch cast iron pipe, serving as a flue from the same fire which heats the water for bottom heat. From the fire at one end it *uniformly ascends* along the front, till it terminates in a brick chimney at the farther end of the compartment. The joints of the cast iron pipe are merely cemented with clay. There is a fire at each of the opposite ends of the two compartments; and the chimney where the pipes terminate, is in the middle, at the front. Hot water was previously employed for top heat; but the tubular cast iron flue was found

to be more effective, with less fuel, than was required for the hot water. This mode certainly deserves to be made the subject of experiment, in order to ascertain exactly its advantages, so as to be able to state them in numerical terms. In the first place, it will be necessary to take into consideration the expense of *one* cast iron pipe, of six inches diameter, compared with *two* four-inch pipes, flow and return, for hot water. The circumference of the six-inch pipe, is to the sum of the circumferences of the four-inch pipes, as 18·857 to 25·142, or within a fraction of 15 to 20. It therefore appears, that about one-fourth less metal is required for the flue, than for the pipes; and if it were possible to get the larger casting, at the same rate per lb., as the smaller, the cast iron flue would be, in the first instance, a saving of 25% per cent. This alone is an important object; and when the saving of fuel and more effective heating are stated to be the results, certainly no more arguments need be adduced in favor of the plan. It is necessary, however, to make a few remarks with reference to the position of the cast iron flue. It was stated above, that it uniformly ascends along the front. This being the case, the heated air also ascends naturally towards the farther end, thereby causing a less pressure in that part of the pipe next the fire. This part would become excessively hot, if the pipe were level, and would even give out a greater excess of heat next the fire, than the old flues, iron being a more rapid conductor than the materials of which they were composed. Probably one foot in twenty would be a sufficient gradient; those observed, appeared to rise more than this."

The Montreuil mode of training peach trees, and the Thormery plan of training grapes, are noticed at length, with illustrative engravings, but, as our article has already extended to considerable length, we shall refer to these at another time.

Mr. Thompson left Paris, March 18th, by railway to Rouen, and arrived in London on the evening of the 20th. In concluding his notes, he acknowledges the kindness he experienced in France, from every one engaged in Horticulture, to whom he had occasion to apply for information. He found all intelligent and obliging, anxious to avail themselves of improvements in Horticulture, and willing to communicate a knowledge of their modes of cultivation to others.

ART. II. *Destruction of Filberts by Fungi.* By N. GOODELL, Esq., N. Y.

FOR many years past, the filbert shrubs in this vicinity have been destroyed to such an extent as to discourage those who would otherwise attempt the cultivation of this fine addition to the dessert.

This destruction has been ascribed to some unknown insect, and severe penalties have been threatened in case he should be identified and convicted.

I am now of the opinion that the death of those shrubs is occasioned by a fungous plant, the sporule of which lodges in the pores of the bark, where it vegetates and spreads in every direction, but not equally, as the ring formed by the plants bursting through the epidermis is of an oval form, its perpendicular diameter being nearly double the horizontal. As the filbert shrub naturally throws off many side shoots or suckers from the crown, few of which stand perpendicular, I have noticed that the injury often appears first upon the upper side of these shoots, and that these little "fairy rings" often extend two or three feet up and down upon the same side of the shoot, which, in a short time, dies, and exhibits all the appearance of rapid decay.

I do not pretend to infallibility in my observations, and would therefore invite the attention of those better versed in botany than myself to this subject, but will venture to call this fungi in question the *rauchii* of the genus *Cryptomyces* L., an excellent representation of which may be found in London's *Encyclopedia of Plants*, page 1020, No. 16,289.

I am astonished sometimes to find to what length we allow our prejudices to extend. In early life, I imbibed a deadly hatred against the *curculio* family, more particularly that one which does such mischief to our stone fruits, and was the first one, I believe, in this country, to expose the turpitude of his character, in that respect, to the public;—but even that exposure was not sufficient to appease my hatred, and, since then, I have been trying to fix another stain upon his character, *viz.* that of destroying the plum tree as well as the fruit, by causing those black bunches upon them which prove

so fatal in many parts of our country. In this attempt, I fear, like many others in which we carry our prejudices too far, I am to be defeated. It is true, that, in examining these excrescences upon plum trees late in the season, I have found the larva of two species of curculio nestling in this soft spongy matter, but have been undecided whether they were the cause of the spongy growth, or whether this peculiar growth did not invite their locality. Reasoning upon the strength of the old adage, "like causes produce like effects," and that family habits are often hereditary, I have watched the effects produced by the puncture in plants made by other members of this family, as those in peas and other plants, but have not found an instance where an excrescence is produced bearing any resemblance to those upon the plum; neither have I been able to detect an egg or larva in any of those bunches until they have been in an advanced state of development.

In my examinations of these bunches, I have thought I detected that peculiar "fungus smell," which accompanies most of the plants of this family, and, having once got a "list," as the sailors say, that way, each succeeding examination has strengthened my opinion, until I am convinced that those bunches are produced by fungus plants, and not by insects.

Rochester, January 10th, 1849.

ART. III. *The Hubbardston Nonsuch Apple.*

By the EDITOR.

IN our last volume, (XIV. p. 545,) in our list of select apples, we described this excellent variety, and gave an engraving of the fruit. We there stated, that "its season of maturity was in October and November, and that it could not be classed even among the early winter varieties." For four or five years, we have made exertions to procure some fine specimens of this well known, though not very extensively cultivated apple; and have invariably been disappointed, until the past season, when we had them from three or four different sour-

ces; among the number, some very fine ones from Jos. Stickney, Esq., of Watertown, from which we have had a beautiful drawing made, by our artist, Mr. Sharp, for an early number of the *Fruits of America*. But none of these specimens retained their peculiar excellence, after the early part of December. We therefore, on our own experience, set it down as a late fall apple, and not to be depended upon as a winter fruit.

Our remarks, however, attracted the attention of some of our correspondents, and two or three communications have been received, one of which, from Mr. Geo. Jacques, of Worcester, we here annex :—

“DEAR SIR,—In the December number of your Magazine, (p. 545,) you speak of the Hubbardston Nonsuch. You say, ‘it does not belong—not even among early winter apples.’ This apple, the *genuine*, has been fruited several years upon my father’s farm. Its period of maturing is the same as the Rhode Island Greening exactly. The apple is in its prime from the middle of November to the earlier part of January. In our cellar, which is not the coldest, it frequently keeps till the middle of February. In cooler cellars, I have no doubt it may be kept even through the month of March.

“The reason it is not found in Boston ‘markets, after the middle’ of November, is in part owing to its scarcity, and in part also, owing to the demand eating up the supply, before that time. I am keeping some for you, which I shall send the latter part of January. The tree is a very handsome grower.”

The apples promised by Mr. Jacques, came safely to hand, in the early part of January, and were in a perfect state of preservation; as crisp and fresh as in November, and in flavor, fully equalling the high reputation of this variety. But a cool and even temperature is required to preserve them well, for we found, after a week’s exposure in a warmer situation, some of them soon became dry and lost their juiciness. We, however, are well satisfied, that the average season of the Hubbardston Nonsuch is about the same as has been stated by Mr. Jacques. And, in the place of October and November, we would say from October to January. This is the period of ripening, stated by the late Mr. Manning, of Salem, in an

article in our Magazine, (Vol. VII. p. 41,) describing upwards of one hundred varieties, which was overlooked, until after our description referred to was published.

It always gives us great pleasure to correct any error, and we are gratified, not only in presenting Mr. Jacques's remarks, but in receiving the very superior specimens of the fruit, confirmatory of his statement of the season of its keeping.

ART. IV. *Descriptions and Engravings of Select Varieties of Apples.* By the EDITOR.

WE continue our descriptions of select varieties of apples, and, in the course of the volume, shall include several new sorts. The following are all of rather recent introduction, and two of them are now, for the first time, fully described.

XXV. MOTHER. *Magazine of Horticulture*, Vol. X. p. 210.

The Mother apple, (*fig. 9*.) is as yet but little cultivated beyond the immediate locality of its origin. Probably a greater number of bearing trees are growing in Worcester county, in this state, than is elsewhere to be found. It is supposed to have originated on the farm of General Gardner, in Bolton, in the north part of Worcester county, and not in Middlesex county, as we inadvertently stated in our last volume, (XIV. p. 540.) A friend and correspondent writes us from Worcester, where the Mother is best known, that "it is a very handsome apple, of first quality, ripening about mid-autumn, and is worthy of extensive cultivation."

Size, large, about two and three quarter inches broad, and two and three quarters deep: *Form*, roundish oblong, regular, largest in the middle, and narrowing to the crown, which is small: *Skin*, fair, smooth, glossy, with a deep rich yellow ground, nearly covered with deep brilliant red, somewhat striped and mottled, and dotted with small yellow specks: *Stem*, rather short, about half an inch in length, slender, and inserted in a somewhat contracted and not very deep cav-

ity: *Eye*, small, closed, and slightly sunk in a small, shallow, and slightly ribbed basin; segments of the calyx narrow, twisted: *Flesh*, yellow, fine, crisp, and tender: *Juice*,

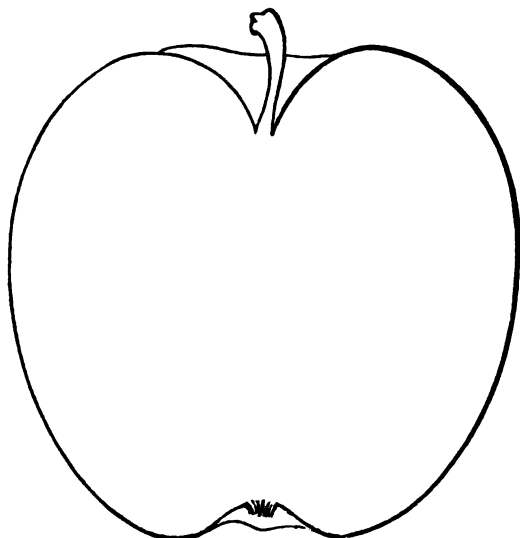


Fig. 9. Mother Apple.

abundant, rich, brisk, and very pleasantly acid, with a high spicy flavor: *Core*, medium size, nearly close: *Seeds*, medium size. Ripe from October to January.

XXVI. HOOKER. *Magazine of Horticulture*, Vol. XIII. p. 112.

The Hooker, (*fig. 10*,) has been briefly noticed by us in a previous volume, (XIII. p. 112,) and a short account of its origin given by our correspondent, Mr. J. W. Bissell, of Rochester, N. Y. The original tree is yet growing on the farm of Mr. Hooker, in Windsor, Conn., and the scions were carried to New York some years ago by E. B. Strong. It is a great favorite where it is known, having much the flavor of the Westfield Seek-No-Further. As a productive apple, it is almost unsurpassed; we recently saw trees in the garden of Mr. Hooker, of Rochester, (Vol. XIV. p. 533,) which were

literally covered with fruit. Mr. Hooker, having kindly forwarded us some fine specimens from his trees, we are enabled to give an accurate description with an engraving of the fruit.

Size, large, about three and a quarter inches broad, and two and three quarters deep: *Form*, roundish, irregular, swollen on one side, flattened at the base, and narrowing to the crown, which is rather small: *Skin*, fair, smooth, with a greenish yellow ground, slightly russeted at the stem, and pretty nearly

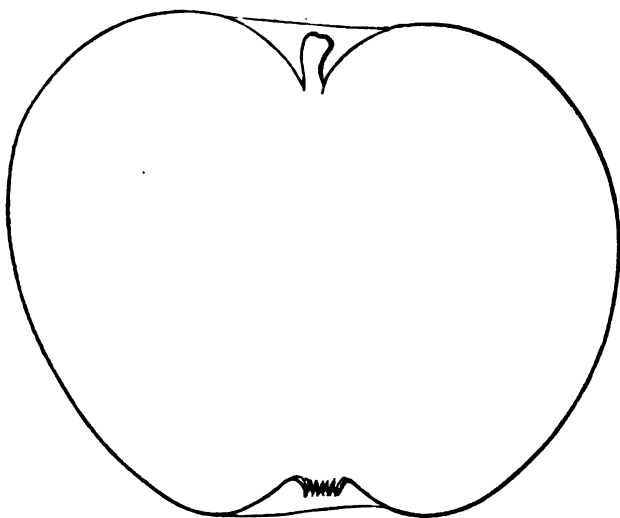


Fig. 10. Hooker Apple.

covered with dark, dull crimson, considerably striped on the shaded side, and dotted with large, prominent, russet specks: *Stem*, short, about quarter of an inch long, stout, and inserted in a small, round, smooth, shallow cavity: *Eye*, small, partially open, and moderately depressed in a round even basin; segments of the calyx broad and short: *Flesh*, greenish white, fine, crisp, and tender: *Juice*, plentiful, pleasantly acid, rich, and high-flavored: *Core*, medium size, close: *Seeds*, rather small, light brown. Ripe from November to January.

XXVII. BEN.

Eustis, of some collections.

Under the name of Ben, or Eustis apple, (*fig. 11.*) this variety is tolerably well known to cultivators in the vicinity of Boston, where it has been occasionally exhibited before the Massachusetts Horticultural Society, by Mr. James Eustis, of South Reading, in which town, we believe, it originated, who introduced it to notice. Tried with other well known and esteemed apples, by the Fruit Committee of the Society, the past autumn, when Mr. Eustis exhibited some fine speci-

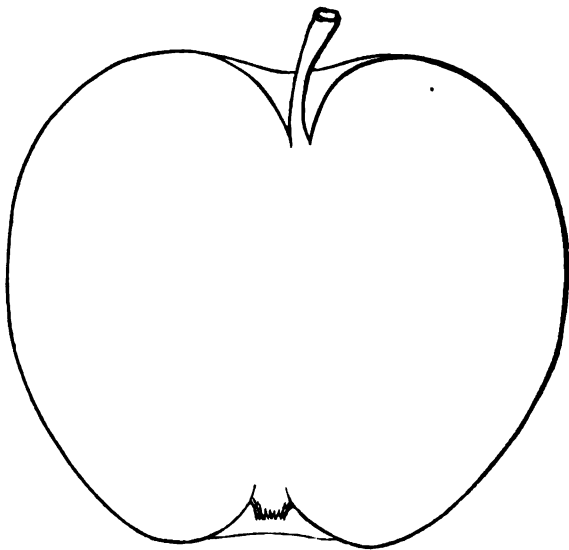


Fig. 11. Ben Apple.

mens, they pronounced it "good for the season, and worthy of cultivation." Mr. Eustis gave us some of the apples, and agreeing with the Committee in their opinion, we have thought it well deserving a place among the select varieties which we intend to describe and figure in our pages. The tree is a healthy grower, and an abundant bearer.

Size, large, about two and a half inches broad, and two and a half deep: *Form*, roundish conical, regular, broad at

the base, and narrowing considerably to the crown which is small: *Skin*, fair, somewhat rough, rich yellow, much russeted around the stem, and broadly marked on the sunny side with pale orange red: *Stem*, medium length, about three quarters of an inch long, slender, and moderately sunk in a small contracted cavity: *Eye*, small, closed, and moderately sunk in a rather large and abruptly depressed basin; segments of the calyx short: *Flesh*, yellowish white, rather fine, crisp, and tender: *Juice*, plentiful, pleasantly acid, with a sprightly and rich pearmain flavor: *Core*, rather large and open: *Seeds*, small, angular. Ripe in November and December.

ART. V. *The Howell Pear, a New Native Seedling; with a Description and Engraving of the Fruit.* By the EDITOR.

AMONG the American pears which have been brought into notice recently, the Howell occupies a prominent place. Some very beautiful specimens of it were exhibited at the last annual show of the Massachusetts Horticultural Society at Faneuil Hall, in September, and a few were forwarded to us, at the same time, by our correspondent, S. D. Pardee, Esq., of New Haven. Highly gratified at finding it a fruit of so much merit, we requested Mr. Pardee to send us an account of its origin, which we were desirous of appending to a full description of the pear. He has kindly complied with our request, and we publish at length his interesting communication, as follows:—

DEAR SIR,—Agreeably to your request I give you the annexed history of the Howell pear, which was exhibited at the last Annual Fair of the Massachusetts Horticultural Society, and of which you had a few specimens to test the quality of the fruit. The seed was planted by the late Thomas Howell, Esq., in his garden in this city, in 1829 or '30, and the tree is therefore about 18 years old.

Mr. Howell's premises adjoined those of the late Governor Edwards, whose seedling pears have acquired such deserved

celebrity, and it was about the time that the Governor's first trees began to bear fruit that Mr. Howell, incited doubtless by his neighbor's example, planted his seed, from which there are now in his garden about twenty seedling pear trees in bearing.

John English, Esq., the present proprietor of the garden, was informed by Mr. Howell, that the seeds he planted were all from fruit known in this city as the Jonah pear. This is a very hard and tough winter pear, producing enormous crops every year, that seldom becomes mellow and fit for a desert fruit, but, when it does, it is very good, being full of rich, sub-acid, slightly astringent juice. The tree which produced these pears stood in Mr. Howell's garden, with a Virgalieu on one side, and a Summer Bon Chrétien, or Pound pear, as they were formerly called here, on the other; and the Howell pear evidently partakes of some of the characteristics of each of these fruits.

The tree is healthy and vigorous, and is now about sixteen feet in height, of an upright growth, with diverging and pendulous branches; young wood pale reddish gray or brown.

It first fruited about seven years ago, and has borne good crops regularly every year since it began. It ripens from the 15th September to the 10th October. The fruit has improved from the first, both in size and quality; and, in the judgment of our Pomological Society, it is now of the first class, and worthy of cultivation in every place where the soil and climate are congenial. The specimens exhibited in Boston this fall were only a fair average of the fruit produced this year, and you noticed them, I presume, as much above medium size, and very fair.

As you have seen and tested the quality of the fruit, I shall leave a description of it to you, knowing that you can describe it in accordance with pomological rules much better than myself.

Several of the pears produced by Mr. Howell are very good, and their quality improves with the age of the trees, but the Howell pear is decidedly the best, and perhaps the only one that, amongst the multitude of good pears now cultivated, will stand forth as of superior excellence.

One of Mr. Howell's pears has been called, by Mr. English, the *New Huren Beauty*. It is certainly the most beautiful

pear I ever saw, and I have been at your annual fair, where two or three hundred varieties were exhibited. It is also a pleasant agreeable fruit, but it lacks the flavor and richness essential to a pear of the first quality.

Mr. Howell was a worthy excellent old gentleman, somewhat eccentric in his habits and manners; but, although he left no children to transmit his name to future generations,

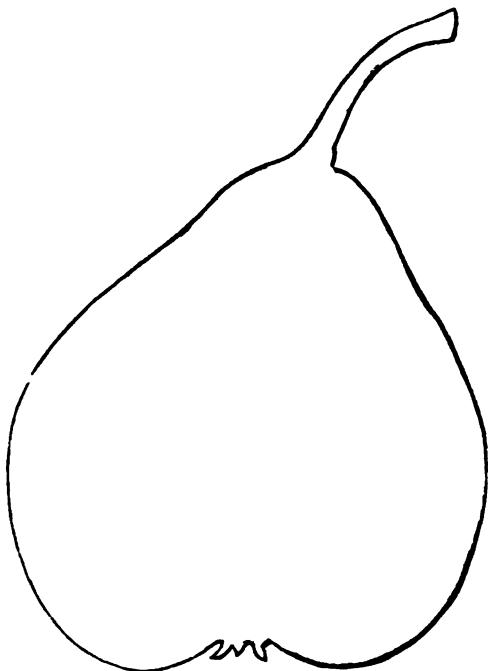


Fig. 12. Howell Pear.

having lived and died a bachelor, yet the Howell pear will put his name and his praise in the mouths of thousands of his fellow-men for many years to come. S. D. P.

New Haven, December 1848.

Our description of the Howell pear (*fig. 12.*) is as follows:—

Size, large, about three inches long, and two and a half in diameter: *Form*, obovate, inclining to pyramidal, regular, rather full at the crown, and tapering to the stem: *Skin*, fair, smooth, lemon yellow when mature, with a slight tinge of blush on the sunny side, and regularly covered with brown-

ish russet specks : *Stem*, medium length, about an inch long, moderately stout, curved, and inserted without any depression : *Eye*, rather large, open, and little sunk in a very broad smooth basin ; segments of the calyx rather long and partially reflexed : *Flesh*, white, slightly coarse, melting, and juicy : *Flavor*, rich, brisk, and vinous, with a pleasant perfume : *Core*, medium size : *Seeds*, rather large, long, and pointed. Ripe in September and October.

We have also a drawing and description of the New Haven Beauty, which Mr. Pardee speaks of; and although, as he states, it is one of the most beautiful pears, and perhaps worthy of cultivation on that account, yet we have not thought it of sufficient merit to publish the description and engraving : if, on further trial, it should prove better, we shall include it in our article describing all the most popular and desirable pears.

ART. VI. *On the Cultivation and Treatment of the Lisianthus Russellianus.* By WILLIAM SAUNDERS, Gardener to WILLIAM BOSTWICK, Esq. New Haven, Conn.

It occurred to me the other day, while potting some plants of *Lisianthus Russellianus*, that I might furnish you with a brief detail of my mode of treating these truly beautiful plants. I very seldom see it cultivated. I am surprised at this. Its fine habit, the beautiful dark green color of its foliage, and the brilliancy of its flowers, renders it an object well worthy of all the attention that the most zealous amateur can bestow upon it.

The seeds are sown in March, the earlier the better, so that the plants may have a long season's growth, and be well established before winter. For this purpose, prepare a four-inch pot, by placing two inches of drainage at the bottom, and fill up to within half an inch of the rim with a mixture of loam, leaf mould, and sand ; make this firm, and level it properly, and, on the surface, sow the seeds, covering them very slightly with a little dry sand. Lay a flat piece of glass on the pot, as this is far superior to a bell glass, for the pur-

pose of raising seeds. Now, get a six-inch pot, and stop up the drainage hole at the bottom, and put in as much moss as will bring the seed-pot level with the rim; then pack firmly between the two with moss, and soak it well with water; this will be absorbed by the seed-pot as it requires it, and obviate the necessity of watering the seeds at the top.

If there is a genial bottom heat convenient, place the pots on it, this, though desirable, is by no means absolutely necessary, as the seeds will germinate freely in a warm greenhouse. As the young plants come up, admit air gradually, keeping up the glass with a peg, and, when the seed leaves are fully expanded, plant them out about an inch and a half apart, in large pots prepared as before. A cucumber frame will now suit them well for a week or two, until they are fit to be planted singly in small pots, when they will do well plunged in a box of sawdust or tan bark, always kept moist, and placed near the glass, in a warm house or frame. As soon as these pots are filled with roots, shift the plants into four-inch ones, in equal portions of loam, leaf mould, and bog earth, with a little sand. They must always be shaded from the bright sun. It is a good plan to scatter a little sand on the glass over them, as few plants are sooner hurt with severe sun. When the leading shoot attains the height of four or five inches, stop it, and it will speedily throw out numerous side branches, and assume a bushy habit.

Although pretty strong, do not shift them again, as they will be easier kept through the winter, when the pots are full of roots; they will require to be carefully watered as autumn closes, and, in winter, keep them nearly dry. Put them on a warm shelf in the greenhouse, and take care not to wet the foliage, as it is easily damped off.

Early in the following spring, they should be placed in a warm temperature, watered, and induced to grow. As soon as they start, give them a shift into a larger pot, still keeping them growing in a moist atmosphere, and they will soon require another shift into a twelve inch pot; this time the soil should be stronger, that is, more turfy loam should be added to it, and less leaf mould, introducing a few pieces of charcoal when potting. Syringe them occasionally in the absence of sun. They will come into flower in June or July, and if kept

74 *On the Cultivation of the Lisianthus Russellianus.*

in a growing state, by constant attentive watering, will continue in bloom till October; but if once allowed to get too dry, the flowers will speedily fall, and their beauty wholly destroyed. I have propagated them from cuttings, taken off in spring, but I think plants so produced, are always more stunted in appearance, the flowers small and soon drop off.

New Haven, January 15th, 1849.

It is true, as Mr. Saunders states, that this most beautiful plant is rarely seen in our collections; and why it is not, is a question that may well be asked. As a summer flowering plant, there are few which equal it, and fewer still which excel it. We apprehend, therefore, that it is mainly owing to a general impression, that it is very difficult of cultivation. The seeds are small, and require careful treatment to vegetate them, but, beyond this, there is no very great difficulty in producing good plants. Mr. Saunders's article is consequently just in good season, and to the purpose. If his directions are followed, this most showy plant may be made the ornament of every garden, whether there is a greenhouse or not, for we have seen it thriving finely, plunged out in the open border, displaying at least twenty of its large, deep blue, cup-shaped flowers at once. What adds to its value is, that it may be kept in bloom from July till Christmas.

In the *Journal* of the London Horticultural Society, for October last, (Vol. III. p. 308,) is an excellent article upon the growth of this beautiful plant, which we have transferred to our pages; taken in common with that of Mr. Saunders, the amateur is in possession of all the information he need to possess, to grow this fine plant. Mr Green, the author of the article, is one of the most successful cultivators around London, and has received numerous premiums for the fine specimens of plants exhibited before the London Horticultural Society.

We had nearly forgotten to mention, that, two years ago, we had three or four small plants in one pot, all we had raised out of several seeds,—which, in order to have them under our eye, were wintered in the parlor, where they were preserved in fine health. Early in spring, they were potted off singly, into pots, in the same soil recommended by Mr. Saunders, and they succeeded finely, and gave an abundance of flowers.—*Ed.*

REVIEWS.

ART. I. *A Practical Treatise on the Culture and Treatment of the Grape Vine; embracing its History, with Directions for its Treatment in the United States, in the open air, and under Glass Structures, with or without Fire Heat.* By J. FISK ALLEN. Second Edition, enlarged. 1 Vol. 8vo. pp. 247. Boston, 1848.

THE best evidence of the increasing interest manifested in the cultivation of the grape, is the desire to possess all the information upon the subject, which comes before the public. It is but little more than a year, since Mr. Allen, at the suggestion of some friends, prepared his little manual of fifty pages or so, which was noticed by us in our volume for 1847, (XIII. p. 406,) and now we have the same before us, enlarged and extended to upwards of two hundred pages, forming a complete treatise upon the culture of the grape, under glass, as well as in the open air.

The cultivation of the grape, though so rapidly extended within a few years, and carried, as it is, to so high a state of perfection in some few instances, must yet be considered as merely begun in this country. In the vicinity of Boston, there is a large number of grape-growers, who make it a business to produce fruit for sale, and who keep the market well supplied from April to December; and there is a still greater number of amateur cultivators, who raise immense quantities of grapes for their own consumption. In New York and Philadelphia, there are some considerable quantities of grapes, artificially grown. But, with few exceptions, beyond the vicinity of these cities, the culture of the grape, under glass, has not yet been attempted. Through the several volumes of our Magazine, numerous excellent articles will be found upon the treatment of the vine; and we are happy to know that they have not only directed attention to the growth of this delicious fruit, but have rendered valuable aid in its successful cultivation. Mr. Allen's treatise, though of limited extent, came in good time to push on the work; and now, in its more

enlarged form, we doubt not it will contribute much more to extend the cultivation of a fruit, which, in our climate, can only be obtained by artificial means.

The most valuable part of the treatise, viz., that detailing Mr. Allen's own experience, being the same as in the first edition which we have reviewed, as above referred to, we shall now principally confine our remarks to Mr. Allen's observations on *manures, the formation of borders, &c.*, which occupy about fifty pages of this edition; and, as the author has made a somewhat free use of our name, and misstated our position, we shall examine his views on these subjects, and see how far they are in accordance with the opinions of the best grape cultivators abroad, or may be applied successfully to the cultivation of the grape.

But first, we have a word to say relative to Mr. Allen's remarks on the "aspect for a grapery." He advised that "a house should front the south;" and, in our Review, we stated that this was not "all important," that "in our bright climate, any position but a northern one, would enable the cultivator to produce the most delicious grapes." Mr. Allen still adheres to his opinion. Yet, in a note relative to the construction of houses, (p. 15,) he states that a "*span roofed* house is superior in its arrangements to a *lean-to house*, (facing the south,) and, under the same circumstances, will produce a crop ten to fifteen days sooner, and will yield a greater amount of fruit in a given space." The reasons why, he does not give. Now, every cultivator knows, that the grape is a native of woods, where it often climbs up trees to the height of 50 feet, with the shoots more or less shaded by the branches on which it clings for support; yet all know that the grapes, on all parts of such a vine, are equally high colored and excellent, and that it is not a direct exposure to the rays of a hot sun they so much need, as a moderate quantity of light, and air. Mr. Allen quotes, (p. 13,) an account of some grapes exhibited at a horticultural show, which were "raised in London, under a glass case, without fire heat, in an aspect nearly *northwest* (!) and where they received only about one hour's sun in the latter part of the day; they were a small black kind, and well colored; a fact corroborative of the opinion now entertained, that grapes should be sheltered from the direct rays of the sun upon the fruit."

Need more be said? Again; Mr. Allen gives some meteorological statements of our climate, as compared with that of England, thus:—

“In 1833, it appears that at the place of record in England, the weather of that year was 152 fine days, 83 cloudy, and 130 when it rained or snowed some part of the day.

At Salem, the average of three years is 219 fine days, 61 cloudy, 80 rainy or snowy; showing a difference in the United States, of 66 days more of sunshine, 50 days less rainy or snowy, and 17 days less of cloudy weather.”

Here we have 66 more clear sunny days in a year, than in England, and with the rays in a more vertical direction too; showing, that with any aspect but a northern one, a grapery would get a far greater quantity of sun and light, than the exact south position in England, where Mr. Allen admits he has eaten the most delicious fruit. These facts make it apparent, that, for ordinary vineries, with or without heat, it is not necessary they should front the south. But that, in any position from east to west, grapes may be grown with perfect success.

In the summer of 1847, we gave a detailed account of our cultivation of the grape, in the greenhouse, (Vol. XIII. p. 293,) with a diary of the temperature, &c., and, in our directions for making the border, we stated that good turfy loam, stable manure and bones, were all that were necessary in their formation, and that the finest grapes could be produced without all the “*quackery* so often recommended, such as a bed of oyster shells, or boiled bones, dead horses, cattle, dogs, slaughter-house manure, blood, soot, &c.” The article was written some time before Mr. Allen's treatise appeared, and before we knew he intended to publish one; and our remarks had reference to practises which had been adopted by some English grape-growers, but which had at that time caused considerable discussion in the gardening journals, and been condemned by the most eminent cultivators. We were, therefore, somewhat surprised, to find Mr. Allen had advised the very plan of making borders of “*carrion*,” which has been so fully condemned. And in our review of his treatise, we merely remarked, that the use of such was “by no means important, but rather to be objected to, especially in retentive soils;” that we were sure such borders never gave better

crops, or more delicious fruit, than those made without them. In this opinion we were fully sustained by subsequent articles in the foreign journals, one of which, by Dr. Lindley, we published in our last volume, (XIV. p. 49,) with some prefatory remarks. But Mr. Allen seems to entertain the opinion, that our denunciation of quackery had reference to *his* views on the subject, and hence the fifty pages of extracts and remarks, to sustain the advice which he gave in the first edition of his volume. He has had up-hill work of it, and we shall not follow him through it. Our object is briefly to show, that a border, made with a layer of dead carcasses at the bottom, is a practise not only condemned by the most successful grape-growers in England—but an expensive and troublesome system—offensive in execution—and not attended with as successful results as the use of materials always at hand—viz—good loam and stable manure.

Mr. Allen, after the quotation of the two entire articles of ours, before alluded to, endeavors to show that we not only used materials which came within our denunciation of *quackery*, but that our border was made unusually rich by top-dressings of guano and manure. We never denied that a border should not be rich. But we did and do assert, that a border should not be made almost entirely of a mass of putrifying substances, over-stimulating the vine at first, to its great injury afterwards. As to ground bones, which we recommended to be mixed with the loam and manure, Mr. Allen would not certainly class them with such substances as dead horses, dogs, &c. Under the term of *quackery*, we denominate the mixture of nearly all of the substances which have been mentioned, and which are yearly recommended by some cultivators; the moderate use of any one or two of them, except the carrion, would not come under that name. All, we believe, so understood the meaning of the word *quackery*, which Mr. Allen seems to have made the text for his long chapter on manures.

But, has Mr. Allen convinced us that borders, made of carrion, are better than such as we have recommended? Has he himself produced as fine grapes as others who use none of the dead carcasses? Far from it. His numerous pages of extracts not only fully sustain our views, but they show that

the practice of burying carrion has been an entire failure among English cultivators, and the quotations seem only to be made, in order to denounce them as "strange statements," "impossibilities," "wonderful stories, &c." (p. 226.)

We should occupy several pages if we undertook to examine all the arguments which Mr. Allen adduces in favor of his plan of using dead carcasses. It would not greatly interest the cultivator if we did, as they have been denounced by all French writers upon the vine; and, with one or two exceptions, by the most eminent grape-growers in England; the grapes, from vines growing in well made borders of loam and manure, have far excelled all others there, as well as in our own country.

Let us be understood. We did, and still do, consider it a kind of horticultural quackery, to recommend such a mass of substances, in the formation of a grape border. Mr. Allen tells us that he had a border made of good stable manure, leaves, cow manure, loam and bones, in which the grapes did not grow, (we do not wonder at it,) and that last spring, he enlarged it and added "strong manure, many whole bones, twenty bushels of ground ones, one hundred baskets of charcoal screenings, and as much old mortar and brickbats, with some considerable wood ashes mixed with them." The vines, he states, are now doing well, but the grapes were small, and well colored. If, to such a heterogeneous mass as this, carcasses of fat hogs, dogs and horses, old rags, chips, cider, old shoes, hair, feathers, blood, fish, soot, lime, oyster shells, &c., are added, all of which are recommended by some authors whom Mr. Allen quotes, is the term quackery anything more than it fully merits? This, then, was our object; that gentlemen about to build graperies should fully understand, that though a mixture of all, or of any portion of these substances, might possibly make a border in which grapes could be produced, the simple materials which are always at hand, or easily to be got, such as loam, manure, and ground bones, would be far superior, and give more delicious fruit, and without turning the garden into a noisome and pestilential manure yard. The whole cause of the entire failure of Mr. Hoare's system of grape cultivation, as it has been called, was, that his compost was wholly destitute of LOAM.

Mr. Allen is facetious upon this subject. "These dead carcasses," he says, "appear to be a great bug-bear in our friend's path, and one would suppose, by the dread in which he stands of them, that the bunches of fruit, instead of having the usual bloom, would be ornamented with hogs' bristles, horses' hair, dogs' teeth, &c." We have no fear of them ourselves; but our duty is to caution the amateur cultivator against all quackery, and place him in a path that he will never have cause to regret he followed. Let all who have the time and the desire, test the two methods, and judge for themselves.

ART. II. *Scientific Agriculture, or the Elements of Chemistry, Geology, Botany, and Meteorology, applied to Practical Agriculture.* By M. M. RODGERS, M. D. I Vol. 12 mo. pp. 280. Rochester, 1848.

THE title of this small volume fully indicates the nature of the contents, viz., the practical application of chemistry, geology, botany, &c., to the art of cultivation. Mr. Rodgers, the author, seems very familiar with his subject, and, though "conscious of his inability to do justice to the difficult task," he acquits himself well, and furnishes a very interesting and useful work.

The matter is treated of in five parts, as follows: Part I, Chemistry. II, Geology. III, Botany. IV, Meteorology. V, Scientific Agriculture. Under the last head, there is a great deal of interesting information. The chapter on manures, or, as the author heads it, *Stercology*, contains much that we should be pleased to extract, if we had space. The volume is accompanied with a full and complete glossary, and a copious index.

We cheerfully commend this work, both to the young Horticulturist and Agriculturist, assured that they will rise from its perusal, with a much better knowledge of the science, in which they are so deeply interested.

MISCELLANEOUS INTELLIGENCE.

ART. I. General Notices.

Bones.—That world-renowned chemist, Liebig, says, that a single pound of bone dust, contains as much phosphoric acid, as one hundred pounds of wheat. From this we can easily perceive that there are bones wasted on every farm in this State, sufficient to manure the entire wheat crop. This, to many, will doubtless appear strange, but, nevertheless, true.

Warmth of a Covering of Snow.—At the French Academy of Science, (March 14th, 1848,) M. Arago read a communication on the warmth imparted to the earth, by a covering of snow, and respecting which, there has hitherto been much scepticism. M. Arago stated that M. Boussingault had ascertained the truth of the theory, beyond the possibility of doubt, during the past winter. He found that a thermometer plunged in snow, to the dept of a decimetre, (about four inches,) sometime marked five degrees of heat greater than at the surface.—(*Medical Times.*)

New Food.—What will science do next? From Mr. Walsh's instructive letters in the *Living Age*, we learn that Flandin, a French chemist of the first order, has discovered a means of depriving the flour and fecula of the common *horse-chestnut*, of its bitter property, so as to render it excellent food. In the quantity and quality of the nutritive principle, it comes nearest to wheat. The method of *transubstantiation* is simple and cheap. The pulp of the chestnut is reduced to flour, or the fecula is extracted; then carbonate of soda is added in the proportion of 1 to 1½ to the 100. Thus, 120 or 180 pounds of flour, with the addition of two pounds of carbonate of soda, becomes, after being washed with cold water, perfectly good aliment. The carbonate costs only a few cents the pound. Mr. Flandin remarks that a horse-chestnut tree, planted at the door of a peasant, represents for him the value of a field of potatoes. It is believed that the process for the purification of the horse-chestnut, may be applied to many other vegetable tissues.—(*Newspaper.*)

Culture of Lisianthus Russellianus.—This beautiful and much esteemed plant was introduced into this country, in 1835, from Mexico. Being found to be capable of producing ripe seed in abundance, a large stock of plants was soon diffused among our best cultivators, who hailed it with delight. Nevertheless, strange to say, its successful cultivation, except in a few instances, still remains a desideratum—a fact amply proved by the paucity of really well cultivated plants produced at our great metropolitan exhibitions. Having been somewhat more successful than some of my neighbors, in growing and flowering this plant, truly magnificent, when well managed, I will give my plan, which is as follows :—I sow early in spring; I first fill a 6 inch pot half full of potsherds, over which I place 1 inch of sphagnum moss; I then fill the pot within 1 inch of the top, with rich light sandy soil. When all is pressed down equal, and firm, and a smooth surface made with the bottom of a small pot, I sow the seeds, and cover it very slightly with

dry white sand. I cover the pots with bell glasses, and place them on a shelf, in a shady part of an early vinery, keeping the surface constantly moist, by pouring water on the outside of the glasses. As soon as the plants have come up, air is admitted, and increased as they advance in growth. When sufficiently strong, they are picked out into small pots, having the same drainage, moss, and mixture, as the seed pots, and are again shaded with hand or bell glasses, until the plants become established. In three weeks or a month, they require to be potted off singly into small pots; and I encourage their growth as much as possible, by placing them in a shady part of either a vinery or a melon pit, whichever is kept at the highest temperature, with a humid atmosphere. As soon as they begin to fill their pots with roots, I give them once a week a little clarified manure water. I repot into winter pots, about the middle of August, using pots to suit the size of the plants, and replacing them in the same growing temperature as before, till their pots are filled with roots. After this, I begin to prepare them for winter, by giving them less moisture, more air, and a cooler temperature; and finally they are placed on a shelf near the glass in the coolest part of the stove, and wintered rather dry. Early in February, I begin to increase the heat and moisture; and as soon as they begin to grow freely, I repot them, which is generally about the second week in March. They receive another shift in April, and those that are intended for large specimens a third in May (using 18 or 20 inch pots,) and a mixture consisting of equal quantities, of good strong maiden loam, peat or bog mould, burnt clay, leaf mould, and cow manure, with a little white sand. These materials are well mixed together, and, if dry, are moistened, to prevent their running too close in the pots. In potting, I use a large quantity of drainage, and plenty of rubble stones, small potsherds, and coarse river sand amongst the mixture. I make the mixture just firm, but am very careful to leave it quite porous. I give very little water till the roots reach the sides of the pots: it is increased as the plants and the season advance, giving heat and moisture in proportion. Too much stress cannot be put upon making a proper mechanical arrangement of rich, porous, and well drained soils, which are essential for the healthy development of plants, of the nature of *Lisianthus*. When the young shoots are sufficiently advanced, I stop them immediately above the second joint; each shoot will then produce four; they require stopping about three times. The last stopping for plants required to bloom early, should take place in the first week in June, and for plants required to bloom later, in the first week in July. As they advance in growth, the branches will require to be tied out with sticks, to make round and well-formed plants. When the plants are growing freely, they are sometimes attacked with a disease at the base, which is produced by the moist and confined atmosphere, that is required for their fine growth. To prevent this, I allow the surface to become quite dry once a week, during which, the plants are supplied with moisture from feeders or pans, in which the pots are placed for a few hours, being careful not to allow any stagnant water to remain about them. As soon as the blooms begin to expand, I keep a drier atmosphere, and expose them to more air and light,

which much improves their color. As to the result of the above practice, I may mention, in conclusion, that I grew some seedling plants in 1844, one of which I exhibited at the Horticultural Society's Garden, in July, 1845, which was awarded a silver Knightian medal, accompanied with this note by the judges:—"Had this been exhibited in its proper place, it would have received a higher medal." In July, 1846, a second plant received a large silver medal; and to a third, the same award was made in July, 1847. Another plant was also shown in the same year, at the Royal Botanic Society's Garden, Regent's Park, and was awarded the first prize as a single specimen of superior cultivation. The plant that I exhibited at the Horticultural Society, in July, 1847, had 500 blooms expanded at once, 10 days after the exhibition.—(*Gard. Chron.*, 1848, p. 784.)

Cultivation of Verbenas, and grouping them in the open garden—Verbenas supply us with almost every shade of color. This, with their neat habit, and easy management, render them indispensable, for the purpose of grouping; in fact, they would of themselves supply variety of color enough to fill a group of parterre. The method I pursue with these plants, is as follows: I put in cuttings the latter end of August, in large 48 sized pots, which I consider the best size for the purpose; they are half filled with potsherds; over this I put a bit of moss, and then a few siftings, such as would pass through a half inch seive, filling the pot very nigh to the brim with some fine sandy compost, and covering the whole with a little silver sand. When the cuttings are put in, they should receive a watering with a fine rose, but not until the cutting pots are placed in the frame, or pit, where they are to be struck, and I prefer at this time of year, a close, cold pit or frame, rather than bottom heat. They will require very little further attention than sprinkling and shading, which must be done as required; never allowing them to flag, and giving them as much light as they will bear, without flagging; always allowing the sun to shine on them about one hour every afternoon. As soon as they are struck, they should be gradually inured to light and air, and, as soon as the plants will admit, the lights may be taken off altogether, and the points frequently pinched back. In November they should be on shelves, in a late vinery, or some similar situation, as near the light as possible, and giving them no more water than is absolutely necessary; at the same time they should not be allowed to suffer for want of it. About the middle of February, they may receive more water, and be frequently sprinkled over with the syringe. As soon as they begin to grow, the tops may be taken off for cuttings, and be put in pots as before recommended. They may be placed in a brisk bottom heat, where they will root in about a fortnight. These will make the best plants for bedding. They should be potted off singly, as soon as they are a little hardened, and encouraged as much as possible. If they are not stunted by bad management, they will soon surpass plants that were potted off and established in autumn. The plants in the store-pots should be potted off singly, as soon as the first lot of cuttings are taken off and placed in a little bottom heat; if required, another lot of cuttings may be taken from these plants, also, the first struck cuttings which, if well managed, will make

nice little plants, before time to plant them out. I consider it preferable, to keep the plants in the cutting pots during winter: for, after considerable practical experience, I find they keep much better than when potted off singly. They also require less room, which is a matter of considerable importance; for, if potted after spring, they will grow very well in turf pits, with a little bottom heat, or any similar place, which would be wholly unfit to keep them in during winter. It would be impossible to say which are the best varieties, there are so many whose merits are equal; the object is, to get the hardiest and most free-growing kinds of each class; that is, if they are the most *distinct*. I always prefer the upright growing varieties, as they make the best beds. I never peg down a verbena, as I consider the beds have a bad effect so managed; instead of pegging them down, I stick a quantity of small twigs in the bed, and tie the shoots to them.— (*Gard. Journal*, 1848, p. 420.)

ART. II. Domestic Notices.

Annual Meeting of the N. Y. State Agricultural Society. The annual meeting took place at the Assembly Chamber in Albany, on Wednesday, January 17th, 1849.

L. F. Allen, Esq., the President, called the meeting to order, when the following officers were elected for 1849.

President: John A. King, of Queens.

Vice Presidents: James Monroe, of New York. Saxton Smith, of Putnam. E. P. Prentice, of Albany. Le Roy Mowry, of Washington. William Fuller, of Onondaga. David Maine, of Madison. John Delafield, of Seneca. Henry W. Rodgers, of Erie.

Corresponding Secretary: Benjamin P. Johnson, of Albany.

Recording Secretary: John McD. McIntyre, of Albany.

Treasurer: Luther Tucker, of Albany. *Executive Committee:* J. B. Burnet, of Onondaga. P. N. Rust, of Onondaga. Henry Wager, of Oneida. J. J. Viele, of Rensselaer. Samuel Cheever, of Saratoga.

Mr. Johnson, the Secretary, announced to the meeting, that he had received from Mr. Hovey, of Boston, a splendid volume of Hovey's *Fruits of America*, as a present to the Society, and, on motion of Mr. Marks, of Greene,

Resolved, unanimously, That the thanks of the New York State Agricultural Society be presented to C. M. Hovey, of Boston, for the gift to the Society of his superb work on the "*Fruits of America*."

The President having alluded to the splendid collection of valuable fruits, which had been brought together on the tables of the Society,—

On motion, *Resolved*, That Messrs. Wendell, Howard and Johnson, be a committee to prepare samples of our best winter fruits, and forward a box to the London, Paris, and Belgium Horticultural Societies, with a letter from the Secretary of the Society, in relation to the same.

Resolved, That the committee do recommend to the Executive Committee, the city of Syracuse as the location of the next fair, provided security

be given, to the satisfaction of the Executive Committee, that the local expenses of the fair be discharged by the citizens of Syracuse, the sum not exceeding \$3,500.

The Pomological Exhibition was exceedingly interesting, if we may judge from the report which has been forward to us, as follows:—

Exhibition of Fruit—(from out of this State.) Montreal Horticultural Society, twenty choice varieties. Contributors, J. Frothingham, Esq., W. Lunn, Mrs. McIntosh, G. Shepherd. Cleveland, Ohio, F. R. Elliott, and Prof. J. B. Kirtland, sixteen varieties; J. Gallup, seventeen varieties. A. C. Hubbard, Troy, Michigan, fifteen varieties, and from Judge Hubbard, Plymouth, Michigan, eight varieties. Michael Gander, of Canada West, ten varieties. The thanks of the Society were tendered to each of the contributors, as well as to the Montreal Horticultural Society, and the Secretary was directed to forward to each, the diploma of the Society.

From our own State. J. H. Watts, Rochester, fine specimens of the Northern Spy, and a beautiful painting of this fine fruit, and through Mr. Watts, from the following contributors: Thomas Johnson, Brighton, five varieties. H. R. Brown, Greece, seven varieties. H. Hooker, Brighton, eleven varieties. C. K. Ogden, six varieties. T. Rhoorback, Greece, twelve varieties. J. C. Campbell, Rochester, six varieties. C. Paulk, Honeoye Falls, seedling pear. John Delafield, Oakland, Newtown Pippins, and from Waterloo, through Mr. D., twenty-four varieties. From Tyre, through Mr. D., eleven varieties. From Romulus, through Mr. D., three varieties. From Junius, through Mr. D., one variety, the King apple. Judge Miller, Rochester, two varieties, Winter pear. John Doulan, Greece, Monroe County, seven varieties apples. Joseph Cary, Albany, Isabella and Catawba grapes, very fine, and as fresh as when picked. B. Hodge, Jr., Buffalo Nursery, five varieties, and Stannard seedling apple.

Ellwanger and Barry, Mt. Hope Nurseries, fine specimens of Northern Spy and Melon apples. W. R. Coppock, Buffalo, four varieties. B. P. Johnson presented, (from Cayuga County,) five varieties. Justus Harwood, United Society of Shakers, Niskayuna, four varieties. Samuel Rose, same Society, Watervliet, six varieties. H. Wendell, M. D., Albany, four varieties Winter pears; one apples, five fine Painting seedling cherry. T. C. Peters, Darien, Genesee County, fourteen varieties. Lewis F. Allen, Black Rock, six varieties apples. H. Snyder, Kinderhook, eight varieties. Wilson, Thorburn & Teller, thirteen varieties apples, two of pears. A. Marks, Greene County, four varieties. Dr. J. M. Ward, Albany, seven varieties of apples from his farm in New Jersey. Frederick W. Lay, Greece, Monroe County, from J. Alleyn, Rochester, twelve varieties apples. W. D. Osborn, Port Byron, two varieties apples. Hon. F. Bellingher, Herkimer, Middle apples. P. H. Warner, Columbia, Herkimer County, do. Sheldon Goodrich, Aurelius, Cayuga County, eight varieties. The thanks of the Society were tendered to the contributors, and a volume of transactions to each. The first premium of \$5, and a diploma, was awarded to Chas. Lee, Penn Yan, Yates County, for the Wagener apple.—B. P. Johnson, Secretary, Albany, 1849.

Norfolk County Agricultural and Horticultural Society.—We are pleased to notice, that great exertions are being made, to form an Agricultural and Horticultural Society in Norfolk County, in this State. Gen. Dearborn, Hon. Josiah Quincy, and other eminent individuals, residents of the county, have taken a deep interest in the subject, and, we doubt not, a Society will be organized, which will be of the greatest advantage to the Agricultural and Horticultural interests of the county and State. We shall duly record further movements in the matter.—*Ed.*

Report of the Ohio Nurserymen and Fruit Grower's Convention; Second Session.—We have received a pamphlet of upwards of 60 pages, containing the doings of this convention, which we shall more particularly notice in our next.

Messrs. Hogg & Son's Collection of Plants, at Yorkville, New York, contains many of the newest species of recent introduction. In October last, in a hasty walk through the houses, we noticed, among others, the following :—*Æschynánthus Boschiánus* and *Roxbúrgii*; *Clerodéndron splendens* and *squamátum*; *Polygala Dalmatiána*; *Drymónia punctátà*; *Alóna cœlestis*; *Vibúrnum japónicum*; *Aphelándra cristátà*; *Hibiscus Cameróni*, a beautiful plant for bedding out in summer, with scarlet flowers; *Bouvárdia splendens* and *fláva*; *Forsythia viridissima*; *Stigmaphilon ciliátum*; *Russellia floribúnda*; *Bignónia Tweedieána*, *Columnea Schneidiána*, and many others.

In the open ground, Messrs. Hogg have the finest specimen of *Torreya taxifolia*, in cultivation; it is a handsome looking tree, about five feet high, and somewhat the appearance of a yew, but not of so sombre a hue; it has stood out three winters in the grounds here, and, at least as far as New York, has proved quite hardy. It is well worthy of general cultivation, and, if sufficiently hardy for the latitude of Boston, which we do not doubt, it should be added to the collection of every lover of Evergreen trees.—*Ed.*

Roses and Climbing Plants, suitable for a Trellis or Arbor.—Will you be so kind as to inform me by letter, or through your Magazine, what is the best climbing rose, or honeysuckle, to train over a trellis, which I am about making over our front door. Is the whole thing in good taste? And, if so, would not a light wrought-iron trellis be prettier than the usual heavy wooden structures. What I want is, 1st.—Foliage, without formidable thorns: 2d.—Blossoms, for as many weeks as may be: 3d.—Fragrance, either of the leaves or blossoms, or both: 4th.—Hardihood, which shall laugh at 100° above 0, and 20° below that point.

Would you have two or three varieties intermixed, or only one? If you will be so kind as to write me upon these inquiries, or give us an article upon them, or, which I prefer, do both, you will greatly oblige—Yours, G. J., Worcester, Dec., 1848.

We are glad to aid our correspondent, so far as in our power, and

1st. The best running rose, *all things considered*, is the Queen of the Prairies, but there are others of the same family, which excel it in some respects, though not in all. *Eva Corinne*, *Superba*, *Miss Gunnell*, and the *Milledgeville*, are each beautiful and desirable. All the prairies are rather

thorny,—and none have any very perceptible fragrance, except *Eva Corinne*. For an early blooming one, the *Amadis*, or *New Crimson Boursault*, is one of the most splendid; it has deep red shoots, and no thorns. The *Gloire des Rosamenes*, is very fine, flowering all the summer; but it is not quite so hardy as the *Prairies*. If our selection was confined to two, we should take the *Queen* and the *Amadis*; if to four, we should add *Eva Corinne* and *Milledgeville*; a continued bloom would then be kept up for nearly eight weeks.

2d. If a honeysuckle is desired, we know of none so well deserving the first selection, as the *Old Variegated Monthly*: but if two are selected, the *Old Scarlet* should be added; and if four, the *Yellow*, and pubescent: but for its liability to be occasionally killed by very severe cold, the *Chinese Twining* is one of the most delicate growing, fragrant and beautiful.

3d. The arbor is in perfect keeping with good taste, but it should be made as light as possible. For this purpose, a trellis, made of large wire, or small iron rods, is far better, neater, and more durable than wood; and, when covered in summer with foliage and flowers, would present a graceful appearance. Such trellises, we believe, are manufactured in Philadelphia, at a very cheap rate; but any blacksmith could put one up without any trouble.

4th. We should certainly have more than one variety planted out. We should at least, for the place intended, plant four vines, two on each side, each of which we would have different, whether roses or honeysuckles. The contrast in the color, size, and form of the flowers, the hue and shape of the foliage, the color of the wood, and the habit of growth, would all contribute in rendering them more pleasing and desirable.—*Ed.*

ART. III. *Massachusetts Horticultural Society.*

REPORT OF THE COMMITTEE ON FLOWERS, AWARDING PREMIUMS FOR 1848.

The Committee on Flowers submit the following Report of Premiums awarded for the year 1848:—

For the best display of Greenhouse Plants, in pots, through the season, the Appleton gold medal, to John Cadness, valued at \$40 00
For the second best, the Society's silver gilt medal, to Hovey & Co., valued at 15 00

PREMIUMS AT THE OPENING OF THE HALL.

PELARGONIUMS.—Class I.—For the 6 best varieties, to Hovey & Co., 6 00
For the second best, to William Quant, 4 00
Class II.—For the best 6 plants, to Hovey, & Co., 6 00
For the second best, to A. Bowditch, 4 00
FUCHSIAS.—For the best 6 varieties, to William Quant, 6 00

CACTUS.—For the best 6 varieties, to Azell Bowditch,	\$3 00
CALCEOLARIAS.—For the best 6 varieties, to John Cadness,	3 00
For the second best, to William Quant,	2 00
CINERARIAS.—For the best 6 varieties, to William Quant,	3 00
For the second best, to John Cadness,	2 00
HEATHS.—To John Quant, a premium of	2 00
VARIOUS SORTS.—For the best display, to William Quant,	8 00
For the second best, to John Quant,	2 00
CUT FLOWERS.—For the best display, to Thomas Needham,	3 00
For the second best, to Joseph Breck & Co.,	2 00

BECK'S SPECIAL PRIZES FOR PELARGONIUMS.

For the best 6 dissimilar and rare varieties, to Hovey & Co.,	25 00
For the second best, to John Quant,	10 00

PREMIUMS DURING THE SEASON.

CAMELLIAS.—For the best 12 flowers, to J. Cadness,	8 00
For the second best, to Hovey & Co.,	5 00
CHINESE AZALEAS.—For the best 6 plants, to Hovey & Co.,	6 00
HYACINTHS.—For the best display, to R. M. Copeland,	5 00
For the second best, to Joseph Breck & Co.,	3 00
TULIPS.—For the best 30 blooms, to John Cadness,	8 00
For the second best, to Joseph Breck & Co.,	6 00
For the third best, to S. Walker,	3 00
SHRUBBY PÆONIES.—For the best display, to John Cadness,	5 00
For the second best, to Joseph Breck & Co.,	3 00
HARDY AZALEAS.—For the best display, to Hovey & Co.,	3 00
For the second best, to Winships,	2 00
HAWTHORNS.—For the best display, to Winships,	3 00
For the second best, to John Kenrick,	2 00
HERBACEOUS PÆONIES.—For the best 6 varieties, to J. S. Cabot,	5 00
For the second best, to Hovey & Co.,	4 00
For the best display, to Joseph Breck & Co.,	3 00
ROSES.—Class I.— <i>Hardy Roses</i> . For the best 30 varieties, to A. Aspinwall,	8 00
For the second best, to Hovey & Co.,	6 00
For the third best, to John Cadness,	5 00
For the best display, to A. Aspinwall,	3 00
Class II.—For the best 12 varieties, to J. Breck & Co.,	5 00
Class III.— <i>Hardy Perpetuals</i> . For the best 10 varieties, to Hovey & Co.,	5 00
For the second best, to A. Aspinwall,	4 00
Class IV.— <i>Prairie Roses</i> . For the best display, to Winships,	4 00
For the second display, to Hovey & Co.,	3 00
PINKS.—For the best 6 varieties, to William Mellor,	4 00
For the second best, to Joseph Breck & Co.,	3 00
For the best display, to William Mellor,	2 00

CARNATIONS. —For the best 10 varieties, to Hovey & Co., .	\$5 00
For the best display, to Hovey & Co., .	3 00
DOUBLE HOLLYHOCKS. —For the best display to Parker Barnes, .	3 00
For the second best, to Hovey & Co., .	2 00
DOUBLE BALSAMS. —For the best display, to Thomas Needham, .	3 00
PHLOXES. —For the best 10 varieties, to Joseph Breck & Co., .	6 00
For the second best, to Hovey & Co., .	4 00
For the third best, to James Nugent, .	3 00
GERMAN ASTERS. —For the best display, to Hovey & Co., .	4 00
For the second best, to John Quant, .	3 00
For the third best, to James Nugent, .	2 00

DANLIAS—In Divisions, as follows :—

DIVISION A.

PREMIER PRIZE. —For the best 12 dissimilar blooms, silver medal to Hovey & Co., .	5 00
SPECIMEN BLOOM. —For the best, to James Nugent, .	3 00
VARIOUS COLORS. —For the best red, to Hovey & Co, .	1 00
For the best yellow, to H. K. Moore, .	1 00
For the best tipped, to Hovey & Co., .	1 00
For the best lilac, to Parker Barnes, .	1 00
For the best pink, to John Quant, .	1 00
For the best white, to J. Quant, .	1 00

DIVISION B.

Class I. —For the best 24 blooms, first premium to P. Barnes, .	8 00
Class III. —For the best 12 blooms, to H. K. Moore, .	5 00
For the second best, to John Quant, .	3 00
HERBACEOUS PLANTS. —For the best display through the season, silver medal to Breck & Co., .	5 00
For the second best, to Winships,, .	4 00
For the third best, to John Cadness, .	3 00
ANNUALS. —For the best display through the season, silver medal, to Breck & Co., .	5 00
For the second best, to John Cadness, .	4 00
For the third best, to Parker Barnes, .	3 00
SHRUBS. —For the best display through the season, to Winships, .	5 00
For the second best, to John Kenrick, .	4 00
For the third best, to Hovey & Co., .	3 00

AWARDED AT THE ANNUAL EXHIBITION.

PLANTS IN POTS. —For the best collection, to John Cadness, .	15 00
For the second best, to John Quant, .	10 00
For the third best, to Hovey & Co., .	8 00
For the fourth best, to Winships, .	5 00
COCKSCOMBS. —For the best 6 plants, to James Nugent, .	3 00
For the second best, to Alexander McLennan, .	2 00
DOUBLE BALSAMS. —For the best 6 plants, to James Nugent, .	3 00

VASE BOUQUETS. —Bradlee Vases.—1st premium to T. Cowen,	\$10 00
Second premium, to Hovey & Co.,	6 00
SOCIETY VASES. —First premium to Hovey & Co.,	10 00
Second premium, to E. A. Story,	6 00
MANTEL BOUQUETS. —First premium, to John Cadness,	8 00
Second premium, to James Nugent,	6 00
Third premium, to E. A. Story,	5 00

BECK'S PRIZES.

AZALEAS. —For the best 6 varieties, to Hovey & Co.,	6 00
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GRATUITIES.

To M. P. Wilder, for a fine display of Camellias,	8 00
To John Cadness, for a fine <i>Primula sinensis</i> ,	3 00
To William Quant, for the same,	3 00
To William Quant, for <i>Blétia Tankervilleæ</i> ,	3 00
To J. Quant, for fine <i>Schizanthus</i> ,	1 00
To Mr. Liversidge, for fine Stocks,	1 00
To M. P. Wilder, for display of Greenhouse plants,	8 00
To M. P. Wilder, for fine display of Roses,	3 00
To William Quant, for a fine plant of <i>Ixora coccinea</i> ,	3 00
To Joseph Breck & Co., for Tulips,	3 00
To John Cadness, for <i>Calystègia pubescens</i> ,	3 00
To N. J. Becar, for <i>Calceolarias</i> , the society's medal,	5 00
To S. Walker, for <i>Ranunculuses</i> ,	3 00
To A. Bowditch, for <i>Anemonies</i> ,	3 00
To J. Cadness, for rare plants,	2 00
To Miss Russell, for Bouquets and baskets of Flowers,	8 50
To John Quant, for <i>Buddlèa Lindleyana</i> ,	1 00
To Miss McClean, for Picotee Pinks,	1 00
To William Quant, for <i>Stephanòtus floribunda</i> ,	3 00
To M. P. Wilder, for <i>Pæonies</i> ,	5 00
To William Kenrick, for the same,	2 00
To M. P. Wilder, for Roses,	6 00
To Miss Mary Kenrick, for Bouquets, &c.,	5 50
To S. R. Johnson, for Carnations,	2 00
To J. Cadness, for Greenhouse Plants,	5 00
To J. Cadness, for <i>Gladioluses</i> ,	5 00
To P. Barnes, for Plants,	1 00
To J. G. Shaw, for Indigenous Plants,	1 00
To J. Cadness, for <i>Abèlia rupestris</i> ,	1 00
To M. P. Wilder, for Dahlias,	5 00
To Joseph Breck & Co., for the same,	5 00
To Joseph Breck & Co., for display during the year,	13 00

GRATUITIES AT THE ANNUAL EXHIBITION.

GREENHOUSE PLANTS. —To T. Willott,	10 00
ROSES. —To L. Davenport,	5 00

GRASS DESIGNS.—To Miss H. Barnes, Mrs. I. Mann, M. E. Parker, I. Dier, and Miss Russell, each	\$5 00
DESIGNS.—To J. Sheehan,	5 00
To Miss M. Kenrick and G. Gilman, each	1 00
BOUQUET.—To J. Cadness,	10 00

PREMIUMS FOR PLANTS IN POTS, BOUQUETS, &c.

To William Quant, at different weekly exhibitions,	10 00
To J. Cadness, for the same,	33 00
To A. Bowditch, for the same,	13 00
To Messrs. Winships, for the same,	13 00
To J. Nugent, for the same,	33 00
To J. Quant, for the same,	7 00
To W. Mellor, for the same,	4 00
To Miss Russell, for the same,	4 00
To Hovey & Co., for Plants,	2 00
To J. Sheehan, for Bouquets,	1 00

REPORT OF THE COMMITTEE ON FRUITS.

The Committee on Fruits respectfully report that they have awarded the following prizes and gratuities for the year 1848 :—

PRIZES AND GRATUITIES DURING THE SEASON.

To Otis Johnson, for the best and most interesting exhibition of Fruits during the season, the Lowell medal or plate,	\$25 00
To John F. Allen, for the second best do., the Bradlee plate,	15 00
To J. F. Allen, for very early and fine exhibition of Grapes, a gratuity of	10 00
APPLES.—For the best Summer Apples, to A. D. Williams,	6 00
For the next best do., to Otis Johnson,	4 00
For the best Autumn Apples, to James Eustis,	6 00
For the next best do., to J. L. L. F. Warren,	4 00
For the best Winter Apples, to Otis Johnson,	6 00
For the next best do., to E. M. Richards,	4 00
PEARS.—For the best collection of new Pears not exhibited before this year, to M. P. Wilder, the Society's silver gilt medal,	15 00
For the next best do., to Hovey & Co.,	10 00
For the best Summer Pears, to A. D. Williams,	6 00
For the next best do., to Otis Johnson, Jr.,	4 00
For the best Autumn Pears, to Samuel Leeds,	6 00
For the next best do., to Samuel Downer, Jr.,	4 00
For the best Winter Pears, to John Gordon,	10 00
For the next best do., to Otis Johnson,	6 00
CHERRIES.—For the best specimens, to Otis Johnson,	6 00
For the next best do., to Parker Barnes,	4 00
CURRENTS.—For the best specimens, to George Wilson,	5 00
For the next best do., to Otis Johnson,	3 00

BLACKBERRIES. —For the best specimens, to Josiah Lovett, .	\$ 5 00
For the next best do., to M. Withington, . . .	3 00
FIGS. —For the best specimens, to Hovey & Co., . . .	5 00
For the next best do., to J. F. Allen, . . .	3 00
GRAPES. —For the best specimens, grown under glass previous to	
July 1st, to J. F. Allen,	10 00
For the next best do., to William Quant,	7 00
For the best specimens, grown under glass subsequently to July	
1st., to A. Bowditch,	10 00
For the next best do., to Otis Johnson,	7 00
For the best specimens of Native Grapes, to J. Richardson, .	5 00
For the next best do., to John Crafts,	3 00
GOOSEBERRIES. —For the best specimens, to John Hovey, .	5 00
For the next best do., to F. W. Macondry,	3 00
PEACHES. —For the best specimens, grown under glass previous to	
July 15, to Otis Johnson,	6 00
For the next best do., to F. W. Macondry,	4 00
For the best specimens, open culture, to N. Stetson, . . .	6 00
For the next best do., to Hovey & Co.,	4 00
PLUMS. —For the best specimens, to Samuel Walker, . . .	6 00
For the next best do., to E. E. Bradshaw,	3 00
QUINCES. —For the best specimens, to John Washburn, . . .	5 00
Second premium withheld.	
MUSKMELON. —For the best specimens, to Hovey & Co., . . .	5 00
For the next best do., to E. M. Richards,	3 00
NECTARINES. —For the best specimens, to W. C. Strong, . . .	6 00
For the next best do., to Samuel Walker,	4 00
RASPBERRIES. —For the best specimens, to Josiah Lovett, . . .	5 00
For the next best do., to Cheever Newhall,	3 00
STRAWBERRIES. —For the best specimens, to Otis Johnson, . . .	6 00
For the second best do., to J. Richardson,	4 00
For the third best do., to Isaac Fay,	3 00

GRATUITY.

To John Washburn, for apples, Tolman's Sweet,	5 00
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PRIZES AND GRATUITIES AT THE ANNUAL EXHIBITION IN SEPTEMBER.

APPLES. —For the best twelve varieties, of twelve specimens each, .	
to J. L. L. F. Warren, the Society's plate, valued at	\$ 25 00
For the second best do.; to Messrs. Hyde, the Appleton silver	
gilt medal, valued at	10 00
For the third best do., to E. Tufts,	5 00
PEARS. —For the best twelve varieties, of twelve specimens each, .	
to Samuel Walker, the Lyman plate, valued at	25 00
For the second best do., to Hovey & Co., the Lowell silver gilt	
medal, valued at	15 00
For the third best do., to Josiah Lovett,	5 00

GRAPES. —For the best five varieties, to G. R. Russel, the Lyman plate,		15 00
For the best three do., to T. Needham, the Bradlee plate,		10 00
For the best two do., to J. F. Allen,		7 00
For the best one do., to Nahum Stetson,		5 00
ASSORTED FRUIT. —For the best basket of fruit of various kinds,		
to Otis Johnson,		10 00
For the next best do., to Hovey & Co.,		7 00
For the best dish of apples, to George Pierce,		6 00
For the next best do., to Josiah Stickney,		4 00
For the best dish of pears, to James Adams,		6 00
For the next best do., to Samuel Pond,		4 00

GRATUITIES.

To Benj. V. French, for large collection of apples, the Society's medal or plate,	25 00
To M. P. Wilder, for large collection of pears, the Society's medal or plate,	25 00
To Rob't Manning, for large collection of fruit, the Society's medal or plate,	25 00
To J. F. Allen, for extensive collection of grapes,	15 00
To Otis Johnson, B. D. Emerson, and James Arnold, each, the Society's silver medal for fine grapes.	
To John Gordon, F. W. Macondry, Ralph Crooker, Henry Vandine, Cheever Newhall, A. A. Andrews, Enoch Bartlett, and John Washburn, each, the Society's silver medal for fine pears.	
To James Eustis, A. D. Weld, Anson Dexter, Hovey & Co., A. D. Williams & Son, and A. Hall, each, the Society's silver medal for fine apples.	

SPECIAL PRIZE LIST OF FRUITS.

APPLES. —For the two best varieties and specimens of Summer Apples:—	
To A. D. Williams, for the Williams's Favorite,	\$ 5 00
To Otis Johnson, for the Red Astrachan,	5 00
For the two best varieties and specimens of Autumn Apples:—	
To James Eustis, for the Ben apple,	5 00
To J. L. L. F. Warren, for the Hubbardston Nonsuch,	5 00
For the two best varieties and specimens of Winter Apples:—	
To Otis Johnson, for the Rhode Island Greening,	5 00
To E. M. Richards, for the Baldwin,	5 00
PEARS. —For the two best varieties and specimens of Summer Pears:—	
To Otis Johnson, for the Bloodgood,	5 00
To A. D. Williams, for the Jargonelle,	5 00
For the two best varieties and specimens of Autumn Pears:—	
To Samuel Downer, Jr., for the Louise Bonne de Jersey,	5 00
To A. D. Williams, for the Urbaniste,	5 00
For the two best varieties and specimens of Winter Pears:—	
To L. B. Comins, for the Passe Colmar,	5 00
To Joseph S. Cabot, for the Beurré d'Aremberg,	5 00

PLUMS.—For the two best varieties :—

To Samuel Walker, for the Green Gage, . . .	\$ 5 00
To E. E. Bradshaw, for the Bradshaw, . . .	5 00

CHERRIES.—For the three best varieties :—

To Otis Johnson, for the Black Tartarian, . . .	5 00
To J. L. L. F. Warren, for the Transparent, . . .	5 00
To Otis Johnson, for the Sparhawk's Honey, . . .	5 00

PEACHES.—For the three best varieties :—

To Nahum Stetson, for the Early Crawford, . . .	5 00
To Hovey & Co., for the Jaques, . . .	5 00
To Galen Merriam, for the Oldmixon, . . .	5 00

REPORT OF THE COMMITTEE ON VEGETABLES.

The Committee on Vegetables would respectfully submit the following list of premiums, which they have awarded during the year 1848 :—

ASPARAGUS.—For the earliest and best, to Wm. Quant, . . . \$ 5 00

For the second best do., to John Hill, . . . 3 00

BEETS.—For the best Blood beets during the season, to A. D.

Williams, . . . 3 00

BROCCOLI.—No premium.**BEANS.**—For the best and earliest string beans, to James Nugent, . . 3 00

For the best and earliest Lima beans, to F. W. Macondry, . . 3 00

CUCUMBERS.—For the best pair under glass, previous to the first

Saturday of June, to Thos. Needham, . . . 5 00

For the second best do. do., to John Quant, . . . 3 00

CAULIFLOWERS.—For the best and largest during the season, to A.

D. Williams, . . . 5 00

CORN.—For the best sweet corn, to A. D. Williams, . . . 3 00**CABBAGE.**—For the best Drumhead cabbage, during the season, to

A. D. Williams, . . . 5 00

For the best Savoy do. during the season, to A. D. Williams, 3 00

EGG PLANTS.—For the best display during the season, to J. Quant, 3 00**LETTUCE.**—For the best, before the first Saturday in July, to W. Quant, 3 00

For the second best, to A. D. Williams, . . . 2 00

POTATOES.—For the best and earliest peck, previous to August 1,

to A. D. Williams, . . . 3 00

For the second best, to F. W. Macondry, . . . 2 00

PEAS.—No premium awarded.**RHUBARB.**—For the largest and best, previous to the first Saturday

in July, to Josiah Lovett, . . . 5 00

For the second best, to Wm. Quant, . . . 3 00

SQUASHES.—For the best pure Canada squashes, to A. D. Williams, 3 00**TOMATOES.**—For the best and earliest, to A. D. Williams, . . . 5 00**VEGETABLES.**—For the best display and greatest variety at the

weekly exhibitions, to A. D. Williams, . . . 5 00

For the second best do., no premium.

For the best display and greatest variety at the annual exhibition, to F. W. Macondry ,	\$ 10 00
For the second best do., to A. D. Williams,	6 00

GRATUITIES.

To S. W. Cole, for a fine show, consisting of forty-five varieties of potatoes, thirty-seven of which were seedlings of 1848,	10 00
To George Pierce, for fine blue and white broccoli,	5 00
To Daniel Brims, for fine celery,	5 00
To J. E. Teschemacher, for a fine display of vegetables, many of them new,	5 00
To James Cruikshank, for a fine display of vegetables,	3 00
To A. Bowditch, for fine cabbages,	2 00
To A. McLennan, for superior egg plants,	2 00
To E. Cameron, for the largest Drumhead cabbages,	2 00
To N. Stetson, for large tomatoes,	1 00
To B. V. French and Hovey & Co., for a fine show of potatoes, each,	1 00
To Edward Burns, for a good display of cucumbers,	3 00
To John Quant, for a show of Lima beans,	2 00

HORTICULTURAL MEMORANDA

FOR FEBRUARY.

FRUIT DEPARTMENT.

Grape Vines, in the greenhouse, will now begin to swell their buds, and will need some attention. As soon as it is perceived that they begin to swell, the vines should be syringed morning and evening, until the eyes are evenly broken. The temperature of the house should be evenly kept, at about 45° to 50° at night, for the first fortnight, and from 50° to 55°, the last fortnight of the month. In cold houses, the temperature should be kept low, by opening a few of the sashes, in the middle of the warmest days, as too much heat might prematurely cause the buds to swell. Cuttings may now be put in, if young vines are wanted.

Fig Trees, in pots, should be liberally watered, and frequently syringed.

Peach Trees, in pots, may still be brought in for a succession.

Strawberries, in pots, now introduced from a frame, on to a warm shelf, will bear abundantly.

Scions, of fruit trees, may be cut now, and they may be safely kept in a cool place.

Cuttings, of quinces, currants, &c., may be taken off now, for the purpose of raising young plants, if they are wanted.

FLOWER DEPARTMENT.

Pelargoniums should be attended to carefully. Keep the plants free from the green fly: top all rapidly growing shoots, and keep the branches

well spread out, and not crowded: Water rather more liberally, and syringe occasionally. Air the house freely, and keep the plants near the glass, and with ample room for a free circulation on all sides.

Camellias will now begin to grow, and will require greater supplies of water; syringe liberally, and if the sun is too powerful, shade the plants during the middle of the day. Continue to inarch, if young plants are wanted. Where plants are greatly in need of repotting, it may be done before they begin to grow.

Japan lilies should now be looked after: they will all require repotting this month: such as are the most forward first: set them in a half shady place at first, and water sparingly.

Cactuses will now begin to show an abundance of flower buds, and will require to be more liberally watered.

Azaleas will now begin to flower: young plants, raised last year, may now be shifted into larger pots.

Dahlias may now be brought forward for early blooming, or for propagating young plants.

Violets, in frames, should be well aired every sunny day, and covered close at night to keep out all frost.

Stephanotus floribundus should now be pruned in, repotted, and placed in a warm situation, to make a new growth.

Achimenes, *Gloxinias*, and *Gesneras*, should now be brought forward for a succession.

Orange and Lemon Trees may be grafted now with success.

Hydrangeas, of both kinds, the common and the japonica, may now be propagated from cuttings.

Anemone japonicas, in pots, may now be divided, if an additional stock of plants is wanted.

Salvia splendens, *fulgens*, &c., should now be propagated from cuttings, for a summer stock.

Heliotropes may now be propagated for a stock for bedding out in summer.

Verbenas should be repotted where they have been growing in small size: and if a large stock is wanted, now is a good time to increase them by cuttings.

Heaths and Epacris may now be propagated from cuttings: it is the best season to ensure success.

Gladioluses may now be repotted.

Ranunculuses may be planted now with the best success, if they are protected by frames.

Russellia juncea may now be increased by cuttings: the old plants should now be repotted.

Scarlet Geraniums, for a summer stock, should now be propagated from cuttings.

Seeds of Ten Week Stocks, *Brachycome*, *Pansies*, *Petunias*, and other fine annuals, should now be planted for a stock to plant out early in the spring.

Carnations and Picotees, in frames, should be well aired in fine weather.

THE MAGAZINE OF HORTICULTURE.

MARCH, 1849.

ORIGINAL COMMUNICATIONS.

ART. I. *Notes of a Visit to Several Gardens and Nurseries in Western New York.* By the EDITOR.

(Continued from Vol. XIV. p. 535.)

Syracuse, September 9th, 1848.—We left Rochester in the evening train of cars, and arrived here about midnight, having been detained at Auburn upwards of an hour. Since our visit, some improvement has been made in the running time of the cars between the two cities, to the much greater convenience of the public.

Residence of Gen. Leavenworth.—Our object in stopping at Syracuse was mainly to call on our correspondent, Gen. Leavenworth, to whose articles on the Swan's Orange pear and some other fruits, we, in common with our readers, are so much indebted. As President of the Onondaga County Horticultural Society, he has been one of the most active and energetic friends of horticultural improvement in western New York. He has not only one of the finest residences in the city, but he has an extensive plantation in the environs, where he has introduced all the choicest varieties of fruits. This we unfortunately did not have time to visit, but his city garden convinced us that, had we been able to have delayed our tour, we should have been amply compensated in the neatness, good order, and extent of the grounds.

Gen. Leavenworth's city residence is of limited extent, probably little upwards of an acre, and, but a few years since, was considered so rough and woody a place as to be scarcely

thought of for building upon. However, in the hands of a gentleman of taste, it was just the spot from which to carve out a picturesque villa. The grounds front upon a broad and magnificent avenue leading to the city, which, when laid out not long ago, was cut through a thickly wooded country. The house is a large and commodious one, in the rear of which is the fruit garden, occupying not more than a quarter of an acre, and ascending to the high land in the rear: this and the house occupy about half of the ground: the other half has been made a most beautiful grove; this was done by a judicious cutting away of whole trees in some places, and by pruning and thinning the branches in others, leaving the whole a picturesque mass, which years of time and labor could not have produced.

The garden contained some fine plum, peach, and pear trees and grape vines, of which the Isabellas, now fully ripe here, were the richest and sweetest we ever tasted; the soil is a good loam, on a dry subsoil, and, as the grapes were trained to a trellis on a south fence, they were perfectly mature. The plum trees were literally covered with fruit, now fully ripe, and the trees had but to receive a gentle tap to cover the ground with the ripest and most luscious specimens. The peaches were also full of fine fruit. The pears did not show the same health and vigor: the blight had slightly touched some of the trees, and those that had escaped did not look as we wish to see them. They were, however, yet young, and will probably improve.

A rich treat was our visit to Gen. Leavenworth, not that his city garden afforded a great deal to be seen, but because we had passed a social hour in the company of a gentleman so fully alive to the pleasures and pursuits of a science so eminently diffusive, as he has stated in an admirable address delivered before the Onondaga Horticultural Society last year, of enjoyment and happiness.

In his grounds near the city, Gen. Leavenworth has upwards of seventy of the best varieties of pears, about forty of plums, and forty of peaches, besides all the best cherries, apricots, &c. He was the first to introduce the Hawley apple to notice, and, through his kindness, the Swan's Orange pear was very extensively disseminated; some large trees, near

Syracuse, affording scions which he liberally dispensed to all who applied. When next we visit this city, we hope to give a full account of this garden.

Nurseries of Thorpe & Smith.—Having an hour or two on our hands before the cars left for Albany, we called upon Messrs. Thorpe & Smith, who have extensive grounds near the city, principally devoted to the cultivation of the apple, the principal demand having been for this fruit. Recently, the pear has attracted more attention, and many new varieties have been added, as well as an increased stock of trees; but we found the principal kinds, the Seckel, White Doyenné, Gansell's Bergamot, Stevens's Genessee, Bleeker's Meadow, Brown Beurré, &c.

Nurserymen, as well as amateur cultivators, in this part of the State, are, however, awaking to the importance of more attention to the pear; and, although the fear of the blight dampens the ardor of some, there is a deep interest manifested in the introduction of the newer varieties, and Messrs. Thorpe & Smith, to keep up with the demand for these, have recently added many to their collection, and, among the number, we saw Van Mons Leon le Clerc. We noticed here, as well as in almost every nursery and garden we visited during our tour, that the Glout Morceau is sold for the Beurré d'Aremberg; an error which is easily corrected, if but a careful comparison is made of the wood and foliage with the drawings and descriptions in our *Fruits of America*. We pointed these out to Messrs. Thorpe & Smith, and they at once saw the difference. Pears, as well as apples, have so many peculiarities of wood, foliage, and habit, that careful observation will at once enable a person to detect errors, which otherwise could not be avoided in an extensive nursery.

Messrs. Thorpe & Smith grow an immense number of apple trees, nearly or quite all of which are root-grafted. They are cultivated in rows about three feet apart, so as to admit of a plough between them, and, at three years old, they are good-sized trees. The ground here is a strong rich loam, well suited to the growth of the apple.

Mr. Thorpe's residence, just at the outskirts of the city, contains six or eight acres, and is neatly laid out with a

lawn in front, and an orchard in the rear. A small part of it is devoted to the growth of ornamental trees and shrubs. In passing through the garden, Mr. Thorpe crossed a strawberry, and, as we followed, we inquired the variety; he stated it was Hovey's Seedling; but, upon examining the foliage, we found there was not a plant of the *true* kind in the bed: they appeared to be the Methven. This at once occurred to us as the cause of all the complaints which are made about the productiveness, quality, size, &c., of our seedling in Western New York; and we are satisfied that a majority of the plants, grown under the name of Hovey's Seedling there, are either the Methven, the spurious variety of Mr. Downing, or some other worthless kind.

Albany, September 11th.—Having a few leisure hours after our arrival here, before the train was to leave for Boston, we improved the opportunity to call on our friends, Dr. Wendell and Mr. Wilson.

Residence of Dr. H. Wendell, Academy Park.—In the absence of Dr. Wendell, who was on a horticultural tour to the west, as delegate of the New York State Society, we merely took a hasty walk through his grounds comprising two or three acres. Dr. Wendell intends soon to remove all his trees to an extensive place near the city, where they can have ample room to grow and flourish. In anticipation of this we found the premises completely stocked with young pear trees, dwarfs, pyramids, and standards, some on the quince, and some on the pear; with upwards of thirty kinds in bearing, and, among the number, a beautiful tree of the Flemish Beauty, which he received from Mr. Rivers as the true Beurré Spence, thus confirming the opinion which we some time ago expressed, and of which we were so fully convinced, that, in our description and figure of this variety in the *Fruits of America*, we made it a synonyme. Some of our pomological friends were rather surprised at this, but we believe Mr. Manning, as well as other experienced cultivators, are now satisfied that the Flemish Beauty and the Beurré Spence are one and the same.

We saw here some remarkable specimens of the Beurré Bosc, one of our finest pears; the Inconnue Van Mons, and some other new sorts, were in bearing, but the names we could

not then ascertain. Dr. Wendell is a most enthusiastic cultivator, and unsparing in his exertions to introduce all the choicest fruits.

Nursery of Mr. J. Wilson.—Mr. Wilson is well known as one of the oldest nurserymen in the state; formerly he was located in the vicinity of New York city, where he carried on a thriving business, and, since he has removed to Albany, there has been no diminution of his efforts in the introduction and cultivation of plants.

The grounds are situated about a mile from the city, upon a piece of ground rapidly sloping to the south, and containing several acres. We found it filled with fruit trees, ornamental trees, shrubs, and plants. There are two good greenhouses, but, at this season, they were empty, preparatory to the introduction of the plants for the winter.

Among the fruit trees, we found the true Monarch pear, and also a fine stock of Swan's Orange, and Reid's Seedling, or Oswego Beurré. The Bloodgood succeeds finely here on the quince the first season, but whether it will continue to do so remains to be proved. Mr. Wilson has some fine specimens of privet and cedar hedges, both of which, but more especially the latter, we can highly commend for their neatness and beauty: the cedar forms a fine screen, and ranks with the arbor vitæ in verdure and beauty. Mr. Wilson has a very good stock of the new spiræa, *S. prunifolia pleno*, and he showed us some plants grown from layers and cuttings: the former is much the best mode of propagation, as the plants are suitable for transplanting in the autumn, while those raised from cuttings in the spring were not half as large or as vigorous.

The recent frosts had slightly touched the dahlias, of which Mr. Wilson had a large number, and, among them, some fine seedlings. They had been in fine flower a few days previous.

The neatness and order of Mr. Wilson's grounds highly pleased us, and we only wish that every nurseryman's premises showed so much system and attention to good keeping.

It was our intention to visit the garden of Col. Rathbone, President of the Albany Horticultural Society, and some other amateur cultivators, but we were compelled to forego the pleasure till another opportunity.

ART. II. *Remarks on Fifteen Varieties of Early Plums, which have fruited in the Pomological Garden at Salem.*
By R. MANNING.

In the following remarks, I have considered as early plums those which ripen before the Green Gage.

1. **RIVERS'S EARLY FAVORITE**, (formerly Rivers's Seedling, No. 1.) Size from small to medium; form somewhat oblong, a little one-sided; suture very slight; skin very dark, almost black, thickly sprinkled with russet dots, and a few blotches of russet under a blue bloom; stem short, hardly half an inch in length, set in a small cavity; stone small, parting very freely from the flesh, which is sweet, juicy, and of fine flavor. The best of the very early plums, no collection is complete without it. It is a good grower, making strong downy shoots. Ripe the first of August, being the earliest worth growing. The Rivers Seedling, No. 2, or Early Prolific, has not yet fruited in this country that I know of.

2. **CHESTON OR MATCHLESS**.—Of medium size; form oval, somewhat pointed at each end; skin dark reddish purple, thickly sprinkled with very minute grayish specks, and covered with a thick blue bloom; stem five eighths of an inch long, in a narrow cavity. Flesh, sweet, juicy, and of good flavor; it adheres to the stone. Ripe the first part of August. Wood very downy and vigorous.

3. **MOROCCO**.—Fruit of medium size, roundish, of good flavor, only partially a clingstone. This variety is well known, and commonly considered one of the finest, but, in my opinion, (in which I am joined by good judges, who are acquainted with both,) it is inferior to the Cheston, with which it ripens.

4. **BLACK DAMASK**.—Medium size; form roundish, a little oval, somewhat sunk at the blossom end, and flattened at the stem; suture moderately deep; stem very short, sometimes hardly more than a quarter of an inch in length, stout, and inserted in a narrow cavity; flesh greenish, inclining to yellow near the stone, juicy, with a sweet rich flavor; a half cling; stone short, broad, and thick, roundish, and of medium size. Ripe from the 20th to the 25th of August. In all the

pomological works which I have had an opportunity to consult, the Black Damask is given as a synonyme of the Morocco, but the kind now described is certainly distinct. It was received from England by my father about ten years since, but, from what nursery, I cannot now ascertain. The leaf is darker, more glossy, and narrower than in the Morocco, and the buds are more prominent, but the greatest difference is in the time of ripening, which is invariably from one to two weeks later, under equally favorable circumstances of soil and exposure.

5. **ENGLISH WHEAT.**—(Wheat, of the London *Catalogue*; English, to distinguish it from the American wheat.)—Size, medium, often large; form, oval, a little flattened at the stem end, pointed at the other, frequently somewhat one-sided, suture broad but not deep; stem three quarters of an inch in length, pretty stout, set in a deep cavity; color on the sunny side bright red, speckled and clouded with golden brown, the shaded side often retains a shade of green when fully mature. Bloom thin, light blue; flesh bright yellow, very sweet, rich and juicy, adhering firmly to the stone, which is quite large. Ripe from the 15th to the 25th of August.

6. **DRAP D'OR.**—While our attention is every year called to many new plums, which we are told are "equal to the Green Gage," but few of which fulfil the promises of those whose partiality recommends them, here is one which comes as near that standard of flavor as any other, new or old, and which, though long known, is not one half as much cultivated as it deserves to be. The form and flavor are, as much as possible, like the Green Gage, in size somewhat less, and one or two weeks earlier; skin thin and delicate, of a golden yellow color, mottled, like the Green Gage, with red and russet, and covered with a thin bloom. Downing says, it is "sometimes a little dry," but I have never found it at all deficient in juice. Of vigorous growth, branches downy.

I have fruited the Grosse Mirabelle, and find it quite distinct from the above, though made synonymous by the London *Catalogue*, and those who follow it. Though resembling the Drap d'Or in many respects, it is not ripe before the middle of September. Branches slender, perfectly smooth.

7. **EARLY ORLEANS.**

8. **WILMOT'S NEW EARLY ORLEANS.**

9. **ITALIAN DAMASK.**

10. **LAWRENCE'S EARLY.**—(of the London *Catalogue*, not the Lawrence's Favorite of Downing.) These four resemble each other so much as to be hardly worth cultivating as distinct varieties in the same garden. After the most careful comparison of the first two, all the difference I could detect consisted in small russet specks, which, after the bloom was rubbed off, might be seen on the Wilmot's, but not on the other. Whatever difference exists between the others is, I think, more in the tree than the fruit. The Lawrence's Early is, however, much the most productive, and therefore preferable.

They may be described as of medium size, nearly round, inclining a little to oval, flattened at the ends; skin very dark, purplish red under a thick blue bloom; stem half an inch in length; flesh juicy, somewhat fibrous, parting freely from the stone; flavor sprightly and good, but inferior to the English wheat. Ripe from the 15th to the 25th of August.

11. **GHISTON'S EARLY.**—This proves identical with the Gisborne's of the London *Catalogue*; it is middle-sized, long oval, pointed at the ends; skin yellow; flesh yellow, coarse, and of poor flavor, too poor for any thing but to go into the rejected list.

12. **PEOLY'S EARLY BLUE** is a tolerably good plum, but inferior to many others. Medium size; form oblong; skin dark blue, with a light blue bloom; flesh yellow and good. In season about the 20th of August.

13. **PRECOCE DE TOURS.**

14. **EARLY CROSS.**—These two are not as fully proved as the others, but, so far as they are, I think highly of them. Both are among the earliest ripe. The Early Cross is a native of Salem, named for its originator. It is a clingstone, very sweet.

15. **JAUNE HATIVE** is earlier than any of the others described above but not otherwise valuable.

I may mention, as showing the variation of fruits in different climates, that, in the London *Catalogue*, the cipher is prefixed to the Cheston, English Wheat, and Lawrence's Early, while here they are of fine quality.

Of all those described, I should recommend as best the Rivers's Early Favorite, English Wheat, and Drap d'Or. They would unite all the good qualities of the others, ripen in proper succession, and give a pleasing variety of color and flavor.

Salem, January 31, 1849.

ART. III. *Pomological Notices; or Notices respecting new and superior Fruits, worthy of general Cultivation.* By the EDITOR.

THE deep interest, which is felt in the subject of pomological science, is most apparent in the continued introduction of new varieties, notwithstanding the large number already in cultivation. The foreign catalogues abound in names of new sorts, and many native seedlings have been added to the great number which, within a period of twenty years, have swelled up the catalogue of American varieties. To fully and satisfactorily test the qualities of these almost numberless sorts, is a labor of time; many of them will, undoubtedly, after a while, be rejected as worthless; while others will be retained as deserving a place among the choicest which we now possess.

The task of rejecting is a difficult one; especially as some fruits do not show their real character, only under peculiar circumstances of soil, locality, and management; and, without due caution, a variety might be thrown out, which, in reality, may claim a rank with the very best kinds. But, on the other hand, there are others which soon show such good evidence of their excellence, that they deserve to be brought to the notice of cultivators at once. It is our task, in these notices, to enumerate all which promise to become valuable, that they may claim the early attention of zealous cultivators, and become more generally introduced.

PEARS.

We commence with a notice of some American varieties :

OTT'S SEEDLING.—A Pennsylvania pear, sent to the Massa-

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chusetts Horticultural Society, by Dr. Brinkle, of Philadelphia. In size, about as large as Dearborn's Seedling, and of similar form, with a yellowish skin; Flesh melting, juicy, rich, high-flavored, perfumed, and delicious. Ripe the middle of August.

MOYAMENSING.—Beautiful specimens of this excellent pear were sent us by the kindness of J. P. Cushing, Esq., of Watertown, in whose collection it fruited last year. It is a very fine fruit, well worthy of extensive cultivation. Size medium; Form roundish, with a remarkably thick stem; Skin yellowish, russeted; Flesh melting and juicy, with a rich, spicy and delicious flavor. Ripe in September.

BRANDYWINE.—Sent to the Massachusetts Horticultural Society, by Dr. Brinkle. In form obovate, inclining to pyramidal, with a rather thick fleshy stem; Skin yellowish green, traced with russet; Flesh melting, and very juicy; Flavor rich, and sugary, with a fine perfume. Ripe from the middle of August to the 1st of September. It originated on the banks of the Brandywine, from whence its name.

SUMMER ST. GERMAIN.—Another variety, forwarded to the Massachusetts Horticultural Society, by Dr. Brinkle, which appears to possess excellent qualities. It is a peculiar shaped pear, being nearly as broad and obtuse at the stem end as at the crown, and contracted in the middle. Skin greenish; Flesh melting, and full of a rich saccharine, high-flavored juice. Ripe in September.

GUSTINE'S SUMMER.—A summer pear, sent to us by J. M. Earle, Esq., President of the Worcester Horticultural Society. In size, about as large as Dearborn's Seedling, and ripe about same time; Skin yellowish; Flesh melting, juicy, saccharine, high-flavored and excellent. It promises to be a fine variety.

DANA'S SEEDLING.—Originated from seed, by Mr. Dana, of Roxbury, and fruited last year, we believe, for the second time. Size rather below medium, with a yellow skin, and a fine melting flesh; Flavor rich, sprightly, and good. Ripe about the first of December, and will probably prove better, as the tree becomes older.

OSBAND'S SUMMER.—Originated in Western New York, and believed to be one of the very best summer pears. Our friends in Rochester praised it very highly. It is of medium

size, with a yellow skin, having a red cheek; Flesh melting, juicy, rich, and high-flavored. Ripe from the first to the middle of August. The tree is a tolerably vigorous and healthy grower.

The following are foreign varieties, which have fruited the past year:—

TRIOMPHE DE JODOIGNE.—A very large and fine pear, somewhat of the character of the *Beurré Diel*, but larger, and of more oblong form, with a greenish skin, changing to pale yellow. The flesh is melting and juicy, with a rich saccharine and perfumed flavor. It ripens in December, and promises to be a great acquisition. Our trees only produced three or four specimens the last season, the first time of its fruiting in the country. The tree is remarkably vigorous, with a spreading habit, and with very large glossy deep green leaves.

ADELE DE ST. DENIS (or SERAS).—A handsome fruit of good size, with a skin as russety as the old *Jalousie*. Form pyramidal; Flesh melting, with a brisk, vinous and perfumed flavor. Tree vigorous. Ripe in October.

BEURRE' BENOIST, (or AUGUSTE BENOIST).—A most inviting figure of this has been given in the *Revue Horticole*, for 1848, where it is represented as nearly as large as the *Duchesse d'Angouleme*. Our tree only produced one pear; and, though not large, in quality it more than came up to our expectations. Form obovate, with a yellowish skin, little traced with russet, and tinged with red; Flesh melting, juicy, rich and sugary, with a very high aroma. Ripe in October.

BONNE DES ZEES.—The true variety, which we saw in Paris, (Vol. XI., p. 205,) fruited in our collection last season. The trees were only three years from the bud, on the quince. It is a decided acquisition. The fruit is large, obovate, quite obtuse at the stem, of a deep rich yellow, beautifully shaded with bright red; Flesh melting and juicy; Flavor saccharine, sprightly, pleasantly perfumed and delicious. It succeeds the *Williams's Bon Chrétien*, and is superior to that variety.

ST. NICHOLAS.—An excellent late fall pear, ripening in November; Size large; Skin green and russet; Flesh coarse, melting, juicy and high-flavored.

BRANDE'S ST. GERMAIN.—This was one of the varieties of which scions were sent to Messrs. Manning and Kenrick, by

Dr. Van Mons, in 1834. It has fruited in the collection of Mr. Cabot, of Salem, for four or five years, and is a very excellent winter pear, keeping till March. Size about medium; Form pyramidal; Skin green and russet; Flesh melting, juicy, sugary and rich, with a peculiarly high-flavored aroma. Ripe from December to March.

GRAPES.

In our volume for 1847, (XIII., p. 114,) we gave some account of several new grapes. The number of new varieties which are annually introduced, is, perhaps, smaller than that of any other fruit. Why this is so, it is not our object to inquire now. But a fruit so important, it seems to us, is as deserving of the attempt to produce new and superior seedlings as the pear, the apple, or the peach.

The London Horticultural Society have recently had some additions to the collection in their garden, principally, however, from French nurseries; and, in the last volume of the *Journal*, we find the following sorts noticed and described by Mr. Thompson, the superintendent of the fruit department. Some of them appear to possess much merit, and we trust that, ere long, we shall be enabled to give some further account of them from our own personal experience; till then cultivators of the grape must rely upon the opinions of Mr. Thompson, for their excellence:—

QUEEN MUSCAT.—A new variety, sent to the garden of the London Horticultural Society, by Mr. Glendenning, of Turnham Green, in the spring of 1848. It was only a young plant, raised from an eye in the previous season. It, however, fruited in an eight-inch pot. The size the bunch would attain, from a well-established vine, could not, therefore, only be estimated comparatively with that of other sorts grown in a pot, under similar circumstances, and accordingly it may be stated to be larger than that of the Royal Muscadine. The berries are also fully as large as those of the latter, but perfectly distinct, being oval. They are yellowish white, semi-transparent, so that one seed, which each berry contains, can be seen through the skin. The flesh is firmer than that of the Muscat of Alexandria, rich and sugary. It is an early grape; and as far as can be judged of it, grown as above

stated, it appears highly deserving of cultivation. For pot cultivation, it has proved to be exceedingly well adapted.

SAHIBEE.—A Deccan grape, sent to the Society, by Col. Sykes. A large, handsome, tapering bunch, sometimes slightly shouldered. Berries large, oval, white, with a rose-colored tinge next the sun. Pulp tender, juicy, sweet, without any Muscat flavor, pleasant, but not equal in richness to the Sweetwater. The vine, notwithstanding the hot climate from which it was imported, bursts soon into leaf, and, as the fruit ripens early, it may prove eligible for very early forcing.

We suspect this is the same grape Mr. Buist has noticed in our Magazine, (Vol. XIII., p. 133,) as Decan's superb.

VERDAL.—The foliage of this grape resembles the White Frontignan; but the fruit is more like the Royal Muscadine, to which, in point of flavor, it seems fully equal. It ripens early.

OLWER.—Bunch and berries rather larger than those of the Royal Muscadine. The bunch has stiff shoulders, and the pedicels are short and thick. Berries round white. Pulp juicy, vinous, not quite so sugary as the Royal Muscadine; yet, independent of its properties as a vine grape, it appears deserving of cultivation. It ripens soon after the Royal Muscadine.

The variety was received from Messrs. Baumann, of Bollwiller, in whose catalogue it is classed among the wine grapes with a remark thus:—"Olwer dont l'usage du vin doit être un préservatif contre la gravelle."

REEVES'S MUSCADINE.—Bunch large, broad-shouldered; stalk thick; pedicels short, stiff. Berries oval; skin yellowish white, rather thick; pulp melting, juicy, rich. A good grape, ripening quite as early as the Black Hamburgh, under similar circumstances. This variety was imported from the Cape of Good Hope, without a name, by John Reeves, Esq.; and, as it appears deserving of cultivation, it has been designated as above.

BLUSSARD NOIR.—Smaller, earlier, and a more sugary variety than the Black Hamburgh, which, in other respects, it resembles. This also was received from the nursery of Messrs. Baumann.

GROSS GROMIER DU CANTAL.—A very strong-growing variety with remarkably short-jointed wood. Leaves deeply serrated,

and occasionally deeply lobed; veins and midrib on the under side, somewhat rough, with bristly hairs. Bunch large, with a strong stalk. Berries very large, upwards of three inches in circumference, round, of a red or grizzly color; pulp juicy, with a flavor, as if between the Black Hamburgh and White Sweetwater. The latter being by itself frequently a bad setter, and, on that account, not unusually fertilized by the Black Hamburgh; it is probable that this variety is a cross between the two. At all events, if this be imagined, a correct idea of the grape will be produced; for it seems to partake of both. It was sent to the Society from Paris, by M. Francis Rauch.

THE NICE BLACK CLUSTER.—A seedling raised by Mr. Williams, of Pitmaston, from the White Nice, impregnated by the common Black Cluster. Mr. Williams's object was to obtain a hardy grape, for open culture, with a small blackberry, spreading bunch, not wedged together like the Black Cluster, Miller, &c.; and his experiment completely succeeded. The berries are small and black, and the bunch large and loose growing. In a good season, they were ripe by the middle of September, on the open wall. He states that some of his friends, who regard flavor more than size, have cut away their Hamburgs, and cultivated this instead. Mr. Thompson states that from a vinery the bunches are a foot long, with long loose shoulders; berries small, roundish oval; juice purplish, sugary.

ART. IV. *Remarks on the Formation of Vine Borders; with a Detail of Experiments in the Culture of the Grape, during a Period of Five Years.* By ROBERT B. LEUCHARS, New Haven, Conn.

I BELIEVE there is no subject connected with horticulture, upon which so much quackery and contradiction prevails, as on the constituents of borders, for the successful cultivation of grape vines. Long and elaborate treatises have been written, and facts incontestible have been adduced, in support of the

various methods, by those who have practised them; each party supposing that he had brought forward evidence sufficient to set the subject at rest forever. But amidst much that is sound and practical, there has been a goodly amount of extravagant theory, speculation, and bombast; and, notwithstanding the multitude of productions that have been penned upon this important subject, and the much-talked-of progress which horticulture has made of late years, we are, at the present time, as far from a satisfactory conclusion, as if there had not been a sentence written upon the subject, since the practical days of Abercrombie and Speechly.

On reading, in the *Magazine* for the present month, your strictures on Mr. Allen's treatise on the cultivation of grape vines, I have been induced, by my friend Mr. Saunders, to send you the following account of some experiments I have made in the formation of vine borders, in a very extensive garden in Britain, with a few simple remarks thereon, the result of extensive practice and close investigation into the habits and requirements of the vine. I beg leave to remark, that I do not bring forward these experiments for the purpose of condemning the results of others; but I do wish to condemn a bigoted and uncomplyable opinionism, and, when men write on controverted subjects, like the culture of the vine, with the view of benefiting their fellow-laborers, they ought to advance, not mere assertions, or opinions, though apparently founded on facts, but the undisguised facts themselves, accompanied with their own deductions, if they will; but giving others the credit of capacity in discriminating how far these conclusions may be correct.

Some years ago, I took the management of a garden, where there were a number of old vineries, nearly useless, and three new ones in course of erection. The ingredients necessary to constitute a good border for vines formed the subject of violent controversy in the periodicals of the day, and the carnivorous border of Crawshay, Roberts & Co. was not the least popular, and to which I was decidedly partial. Having every material at command, and a good opportunity thus presented, of testing the merits of the different systems, I resolved that each house should have a border as differently constituted, as was consistent with a likelihood of success.

The whole length of the house was 135 feet, in three divisions, of 45 feet each. The border was taken out 12 feet broad, and 3 feet deep in front, sloping upwards towards the back wall. The subsoil was a stiff cold retentive clay. A drain, one foot deep, was cut along the front, and cross ones every twelve feet, running into it; drain tiles were laid in the bottom, and then filled with stones, broken bricks, &c.; a layer of the same material was then laid over the whole border, to the depth of two feet, on which was placed fresh turves closely together, with their grassy side downwards; flag-stones were placed perpendicularly all round the side of the border, and each division was partitioned off in the same manner; a complete box was thus formed for each house, so that no intrusion could take place from the roots of the one into the other, yet so thoroughly drained, that saturation was impossible. An equal depth, about two feet, was given to each, so that the border, when finished, was about one foot higher than the rest of the ground. The respective divisions were then filled as follows:—

No. 1. Consisted of one half turves, from an old pasture, cut three or four inches thick, the other half being dead carcasses of animals, fish, blood, bones, and other putrid substances; the whole mixed as well as could be with the turves; a barrowful of leaf mould was placed round the roots of each vine, when planted.

No. 2. Consisted of two thirds of turves, as above mentioned, one third made up of equal portions of good dung and leaf mould; ten bushels of broken bones, and two barrowfuls or more of whole ones were mixed with the mass. In this, the vines were planted.

No. 3. This division was made up with the turves alone, without any thing whatever mixed with them. The vines were all planted on one day. The turves, in each case, were chopped up into pieces, not less than 3 or 4 inches square. The vines were planted outside the house, and taken through the front wall. No artificial heat was applied. Each house contained pretty nearly the same kinds, consisting chiefly of Black Hamburgs, and Muscats. The plants were one year old, from eyes of the previous season. Such were the borders, and now for the results:—

To give your readers some definite idea of the results of the above experiment, I will give an account of the growth of the vines, as well as the weight and quality of their fruit, for the five years succeeding their plantation, from notes which I kept regularly during that time. Most of the grapes were sold, generally the whole housefull together. I may here state, that every year the vines were allowed to start of their own accord; no fire heat was given them, except severe weather compelled it, and to assist in maturing the young wood in autumn, when necessary.

FIRST YEAR.—No. 1 started away considerably ahead of the others, and this I attributed to the leaf mould in which they were planted; in a few weeks, Nos. 2 and 3 came up to it, and, by the end of September, no difference was perceptible between the three houses, save in the maturation of their wood: Nos. 2 and 3 were, perhaps, a fortnight earlier than No. 1, and the leaves of the former were yellow, when the latter were green. The incipient fruit stalks were picked off as they appeared.

SECOND YEAR.—No. 1. The vines grew tremendously strong, rather long-jointed, with the exception of one vine, which turned yellow and sickly. The Hamburgs produced a few fine bunches, with very large berries, but much inferior, in color and flavor, to those in the other houses. The Muscats produced a few bunches, and these set badly, though those that remained were large and good. No. 2. This house made beautiful wood, short-jointed, and very equal in size. The Hamburgs produced a lighter crop than in No. 1, but better colored and flavored. The Muscats set better, and the berries equally large and good. No. 3 produced fine rods, nearly as good as No. 2, but a very light crop of fruit. Hamburgs pretty good, bunches and berries rather smaller than No. 2, but higher colored and flavored. Weight of fruit in the three houses respectively:—No. 1.—79 lbs. No. 2.—84 lbs. No. 3.—46 lbs. The summer was very dry, and the borders were liberally supplied with manure water.

THIRD YEAR.—No. 1. Three vines in this house were completely barren. They started with the others, and grew very strong for a short time, but, as they came into flower, the flower stalks curled up, and became abortive. The leaves as-

sumed a yellow and sickly appearance. The others grew very strong, and produced a heavy crop of large fruit, but deficient in flavor and color. Muscats, very irregular, a bunch here and there, set badly; those left, very large and good. No. 2.—Nothing could exceed the beauty and regularity of this house; more than half of the bunches were thinned out. The Hamburgs were much lighter than in No. 1, but unrivalled in color and flavor. The muscats were equally good, and set well. No. 3.—Here also was a beautiful crop, equal, in every respect, to No. 2; more than half were thinned out. Muscats superior to either of the other houses. Weight of crops.—No. 1.—315 lbs. No. 2.—603 lbs. No. 3.—652 lbs.

FOURTH YEAR.—No. 1. Rather better than last year; produced a heavy crop of very large fruit. The three vines above mentioned still sickly, one of them producing a few puny bunches, the other two quite barren, making an unsightly gap, some shoots growing very strong, others weak. No. 2.—A splendid crop of fine large high-flavored fruit, very regular, both in shoots and bunches. No. 3.—General crop inferior to No. 2, bunches and berries smaller, but exquisitely colored and flavored. Weight of crops.—No. 1.—350 lbs. : No. 2.—552 lbs. : No. 3.—497 lbs.

FIFTH YEAR.—No. 1. From the fine appearance this house presented, in the early part of the season, I was in high hopes of its rallying and beating the other two; but my hopes were doomed to disappointment; some of the vines put out one or two shoots, which grew in a state of gross luxuriance, producing a few bunches, which ultimately shanked off; from four Muscats in the house, hardly twice that number of pounds of fruit were produced; one or two of the Hamburgs produced a tolerable crop, but destitute of both color and flavor, so much so, that, when sent to my employer's table, along with the others, they were invariably rejected, while the rest were eaten. No. 2.—Crops beautiful, superior to last year. Not a shanked or shrivelled berry in the whole house. Nothing could exceed the beauty and regularity of this crop. No. 3.—Very beautiful and regular, but inferior in weight, to No. 2, not a berry among them was shanked, and kept for a considerable time longer in a good state, after they were ripe,

than either of the former houses. Weight of the respective crops:—No. 1.—112 lbs.: No. 2.—793 lbs.: No. 3.—603 lbs.

Thus you will observe, that No. 1, with the carrion border, in the four years, produced 856 lbs. of grapes. No. 2, loam, leaf mould, manure, and bones, 2032 lbs., and, in No. 3, with the loam alone, 1798 lbs. were produced. The houses were all managed in the same manner, and if any difference existed, No. 1 had more care bestowed upon it, than the rest; they were all pruned on the spur system, which, if not the most scientific, is, I think, the most simple, and easily performed.

Without entering into a chemical analysis of the ingredients contained in these borders, I think it will appear evident, that the one in which the greatest portion of the constituents of the vine were present, was best adapted for its culture. Thus, No. 1 contained an excess of organic matters, carbon, hydrogen, nitrogen, oxygen, &c., and was deficient in inorganic substances, which are equally essential to the development of the vine. The plants were thereby unable to assimilate the crude organic matters, which they were compelled to absorb. On examining the roots of these vines, I found the greater portion of them were rotten, the chief part of the healthy ones being within a few inches of the surface. No. 3 was rather deficient in organic, but abundant in inorganic matters, which accounts for the fruit being smaller in size than the others, but superior in flavor and color, ripened sooner, and hung on the vines, after they were ripe, longer without shrivelling. No. 2 was every thing that could be desired, and, had I the formation of a hundred borders, I should make them in the same manner. Turves from an old pasture, cut not more than three inches thick, I consider the best material in nature for making a vine border, not only on account of their chemical, but also of their physical properties. No other soil can be compared with them; if deficient in richness, add about one sixth of their bulk, of good dung, and, if too adhesive, a like quantity of leaf mould. Mix a good quantity of whole and broken bones into the mass, and here you have a material for growing grape vines, superior to any carrion composition that I have yet seen. These materials, especially in this country, are comparatively inexpensive, and

easily obtained ; besides, no disagreeable and dangerous effluvia is produced in the neighborhood.

From the foregoing experiments, corroborated by other facts, of a similar nature, that have come under my notice, I conclude that carrion borders are positively injurious to grape vines. I have seen the vines, planted by Roberts, at Raby Castle, and at other places, upon the same principle ; but in no one case have they given satisfaction, equal to those grown in a good border, without carrion. I have seen grapes shown at the London Horticultural Society's exhibitions, as well as at other places, but I have never yet seen them carry away the palm. I will not say that good grapes have not been produced by the carrion borders. The vine is a very accommodating plant, and will sometimes produce good crops, under very unpromising circumstances ; but, until carrion borders prove somewhat more satisfactorily their superiority and permanency over others, than they have yet done,—until I see carrion borders serve some other purpose than that of a hobby-horse for men to ride on parade, in pamphlets, and public periodicals,—until then, I will stick by the common system, should it be as antiquated as the pyramids of Egypt.

New Haven, January 9th, 1849.

It is not often that we have the pleasure of presenting our readers with so valuable an article as that of Mr. Leuchars. Indeed, we are not sure that we give it too high praise to say that it is one of the most common sense, practical, and thorough essays that we have ever read on the subject on which it treats, important as the subject is, especially at the present time, when so much attention is being given to the culture of the grape vine. It comes, too, at an opportune period, substantiating, in every particular, all we have stated in our remarks on the formation of borders in our previous volumes, and especially our observations on Mr. Allen's chapter on manures, which we reviewed in our last number.

Mr. Leuchars has recently arrived in this country, and is personally unknown to us. He is, we believe, a gardener of much experience, and has been employed in some of the most extensive gardens in England. His article will at once

commend him as a man who fully understands his profession. It is not made up of what he has seen—what he has heard—or what he has read;—it is not collected from this book—from that pamphlet—or from the periodicals of the day;—but is the result of his own experience—not conducted with a view to publication for mere authorship, but for his own practical purpose as a reference for future use—just such a collection of facts as any gardener who loves his profession would always seek to possess—but, unfortunately, what most neglect to obtain. His remarks, therefore, will have much greater weight than if they had been the results of experiments now in course of practice, or just completed.

It is unnecessary for us to occupy room with a review of Mr. Leuchars' article. It speaks for itself. But we may be permitted to state that not only do the facts he adduces show the injurious tendency of carrion borders, but they substantiate our opinion of the proper materials of which grape borders should be made, that is, loam, manure, and bones; just the substances we recommended in our first article, (Vol. XIII. p. 400.) It is easy enough to show that grapes can be produced in borders made of a *melange* of brickbats, old mortar, charcoal, old boots, rags, wood ashes, fat hogs, &c. So "accommodating a plant" is the vine, as Mr. Leuchars states, that nobody doubts grapes can be thus raised. The question is not what can be done, but what are the means of arriving at the greatest results. Facts only will determine this; these have been given us by Mr. Leuchars. He has shown what the soil alone will do which nature, in her bounteous gifts, has supplied us with. He has again shown what such ingredients as putrefying masses of dead hogs and horses will accomplish. Both are failures; and, though the author modestly tells us he will not undertake to give a chemical analysis of these substances, he states enough to leave no doubt in the minds of all intelligent cultivators, that both are contrary to all our notions of the action of soils; the first being deficient in organic matter; the latter in the inorganic compounds. His other experiment proves that a judicious admixture of loam and manure, in which a proper proportion of the organic and inorganic substances are supplied, is that which has produced the happiest results.

The best grapes which have recently been seen here were some fine ones exhibited at the annual exhibition of the Massachusetts Horticultural Society, in September last, by G. R. Russell, Esq., of West Roxbury, which were awarded the highest premium of \$25. A reference to our Vol. XII. p. 453, will show how the border was made, precisely as we have advised, and which Mr. Leuchars confirms. The vines were planted on the 17th of May, 1846, and were only in their third year last season, but the bunches and berries were very large, well colored, and as beautiful specimens as the most ardent cultivator could wish.

Mr. Leuchars has kindly promised us some hints on the culture of the peach, and we may congratulate our readers in anticipation of a most excellent essay on so important a subject.—*Ed.*

ART. V. *Ives's Seedling Plum, a new Variety, with a Description and Engraving of the Fruit.* By the EDITOR.

THE catalogue of American varieties of the plum has been greatly extended within a few years, and, if we except the Green Gage, and two or three other sorts, the principal kinds now cultivated are American seedlings. In size and beauty, they surpass most of the foreign varieties, and, with the exception above named, they are superior to them in flavor and general excellence.

A larger part of our American plums have been produced on Long Island, and in the famous plum region on the North River. To these localities we are indebted for the Imperial Gage, Yellow Gage, Red Gage, Jefferson, Columbia, Albany Beauty, &c., &c. New England has furnished a much smaller number of plums than other fruits; this has undoubtedly been because the soil is not quite so favorable as in the places we have just named. We are glad, therefore, in having the opportunity to draw the attention of cultivators to a new and very superior plum, originated in Salem, where two or three other varieties have been produced, but not of the merit of this.

In the autumn of 1847, we learned that Mr. Ives had raised a seedling plum of considerable merit, but it was then so late in the season, that we did not have an opportunity of seeing the fruit. The last fall, Mr. Ives, agreeably to our request, sent us some superior specimens for examination, and for the purpose of making a description of the plum; at the same time giving us permission to name the variety. It is almost unnecessary to say, that we found it one of the most delicious fruits we had eaten, equal to, if not surpassing, the Washington, being nearly as large, and, to our taste, possessing a richer and more luscious flesh. We made a full and complete description of it, with a drawing of the fruit, of which the annexed engraving (*fig. 13.*) is a copy. Wishing to accompany the description with a complete account of the origin of the plum, we requested him to communicate the particulars, which are as follows:—

"DEAR SIR,—Your letter, requesting information relative to my seedling plum, is before me.

"The original tree came up in my garden, about midway between a Washington and Blue Imperatrice, which are about ten feet distant from each other. From the strong resemblance of its fruit to the former,

and from the circumstance of nearly all the fruit usually dropping from the Washington, when ripening, it is probably a seedling from that variety.

"The tree came up in the spring of 1840. In the fall of 1841, I budded it without success, and it was left to bear. In 1845, it produced two or three plums, which, from their appearance, promised well, although the fruit was injured before maturing. It has, however, borne, for the past two years, a handsome, as well as a fine-flavored plum, beautifully spotted, and tinted with red; flesh yellow, rich and delicious; size and form of the imperial Gage.

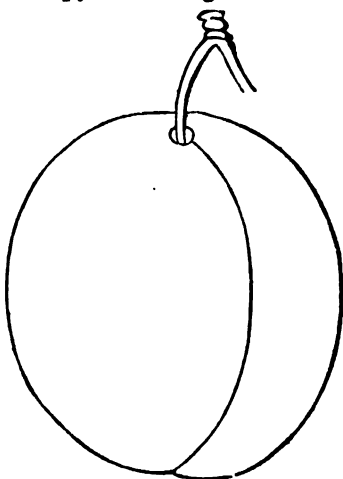


Fig. 13. Ives's Seedling Plum.

"The tree makes long-jointed shoots, very much swollen at, or below, the buds. The shoots of my tree are not so stout and strong as those of the Washington, but a plum-grower, to whom I gave scions, informs me it is *one* of the strongest growers he had, and another cultivator, that it was *the* strongest grower. One of our amateur fruit-growers, I do not now recollect the individual, who tasted the fruit, the season previous to the last, pronounced it superior in quality to the Washington.

"In my last edition of the *Book of Fruits*, in a brief notice of this variety, I have called it the Washington seedling, but, as this may not be definite enough, I prefer that, as you are now about giving the first correct description of the plum, you should have the liberty of giving it a name.—Yours respectfully, J. M. Ives."

To this full account of the history of the original tree, we append the following description, made from some beautiful specimens of last year's growth:—

Size large, about two inches long, and one and three quarters in diameter; Form, roundish oblong, tapering little to the apex, one half larger than the other, with a distinct suture running half round; Skin, yellow, very much mottled, clouded and dotted with red all over the base of the fruit, extending to the sunny side, and covered with a thin whitish bloom; Stem, short, scarcely half an inch long, rather slender, and slightly sunk in a very small cavity; Flesh, rich amber color, melting, and separating freely from the stone; Juice, abundant, rich, luscious and high-flavored, equalling the Green Gage; Stone, medium size, ovate, rather smooth. Ripe the first of September.

We can recommend Mr. Ives's Seedling as one of the very finest plums, superior, in our opinion, to the Jefferson, a variety of great excellence, but which, we think, has been rather overrated. The numerous spots and marblings of red, which cover most of the specimens of Ives's Seedling, give it a greater claim to beauty, than the Jefferson or Washington; and it is fully equal in size to the former plum. It is one of the greatest acquisitions to this class of fruit.

ART. VI. *Floricultural and Botanical Notices of New and Beautiful Plants figured in Foreign Periodicals; with Descriptions of those recently introduced to, or originated in, American Gardens.*

Heliotropium Voltarinum.—This is the name of a new and beautiful species or variety of that highly fragrant and popular flower, the heliotrope. It is similar to the common variety, in habit and foliage, but the flowers are of a dark lavender blue tinge, and the clusters considerably larger than the old one. It has been beautifully in flower, in our collection, and we consider it a great addition to every collection of plants. For bedding out in summer, it will form a charming plant, contrasting, in its deep-colored blossoms, so prettily with the French white tints of the old variety.

Seedling Camellias.—We have recently had two or three very fine seedling camellias in bloom in our collection; one of them somewhat remarkable, as the most beautiful *striped* one that has yet been raised. The ground color is a clear white, very delicately striped with pink through the centre of each petal; the petals being perfectly rose-edged, and slightly cupped. The habit of the plant is vigorous, and the foliage of a deep rich green. Two or three others of much promise have flowered, but we prefer to see them bloom again, when the plants are stronger, before deciding upon their merits.—*Ed.*

98. *POTENTILLA SMOUTII*. MR. SMOUT'S *POTENTILLA*. (*Rosaceæ*.)
Garden Hybrid.

A hardy herbaceous plant; growing two feet high; with yellow and crimson flowers; appearing all summer; increased by divisions of the root; cultivated in any good rich soil. *Flore des Serres*, pl. 373. 1848.

A very pretty hybrid variety of the potentillas, a class of plants not properly appreciated; some of them being very ornamental throughout the autumn, displaying an abundance of their deep crimson and maroon-colored blossoms. If kept properly tied up, the plants have always a neat appearance, but, when straggling under foot, and over the borders, they often have an uninviting aspect. The present plant is a hybrid variety, with rich yellow flowers, very beautifully veined with rosy crimson; the foliage is neat, and the plant vigor-

ous. Raised by M. Smout, an amateur of Malines. (*Flore des Serres*, July.)

99. RO'SA LU'TEA var. PERSIA'NA PLE'NA. THE YELLOW PERSIAN ROSE. (*Rosaceæ*.) Persia.

The Persian yellow rose is now so well known, that it is scarcely necessary to notice it here. It is now to be found in most choice collections, and, from its hardiness and beauty, is esteemed as the finest of all the hardy yellow roses. If any rose amateur does not yet possess it, he should add it to his collection immediately. It is very double, almost as double as the Provence, of the richest golden yellow, and the petals are so firm, that the flowers retain their form in our hottest sun. It is readily increased by budding upon the briar, or by laying the branches. (*Flore des Serres*, July.)

100. CYPRIPE'DIUM LO'WII, Lindl. MR. LOW'S CYPRIPE'DIUM. (*Orchidaceæ*) ?

A greenhouse plant; growing one foot high; with yellow and purple flowers; appearing in spring; a native of?; cultivated in leaf mould and peat. *Flore des Serres*, pl. 375. 1848.

A very brilliant species of the *Cypripedium*, with the superior segments of a yellowish tint, marked with green; and the under ones are of the richest violet purple. The native country is not given. It is a most brilliant species of this fine genus. (*Flore des Serres*, July.)

101. HYDRA'NGEA PUBE'SCENS *Décaine* THE PUBESCENT-LEAVED HYDRANGEA. (*Saxifragaceæ*.) Japan.

A half hardy plant; growing four feet high; with greenish white flowers; appearing in summer; increased by cuttings; cultivated in bog soil and leaf mould. *Flore des Serres*, pl. 378. 1848.

Another interesting species of the well-known hydrangea, not so beautiful as the *H. japonica*, but highly attractive, from its very large pubescent leaves, the petioles of which are of a rich crimson purple, and by its large cymes of greenish white flowers. It is of the same habit as the *H. japonica*. It was introduced to notice, by M. de Craen, of Bruxelles, and is believed to have been raised from seeds received from Japan. (*Flore des Serres*, August.)

102. RO'SA ODORA'TA var. THE FIVE-COLORED ROSE OF CHINA. (*Rosaceæ*.) China.

Here we have the famous five-colored rose, which Mr. For-

tune sent home from his expedition to China, and which we have before noticed, in a brief account of his tour, (Vol. XII., p. 446.) With M. Van Houtte, it has, however, proved only a two-colored rose, extremely beautiful, but not coming up to the expectations which had been formed of it in regard to color. It is a *tea* rose, very full and double, with the petals of a yellowish sulphur color, having, for the most part, a large stripe or band of bright crimson, running through the centre of each, producing a splendid effect. The foliage is of a deep shining green. This is the only striped tea rose yet known. It is an abundant bloomer.

We hope to see this lovely rose soon introduced; it will prove one of the most attractive varieties in our collections. (*Flore des Serres*, August.)

103. PELARGONIUMS. Hybrid varieties.

1. Clown.

2. Harlequin.

3. Singularity.

Recently, much attention has been devoted to the production of *fancy* pelargoniums, which hold the same relative situation to this beautiful tribe, as the fancy dahlias to the self-colored varieties. A few years ago, they would scarcely have attracted any notice, but now, that such perfection has been attained in the form and color of pelargoniums, by Messrs. Beck, and other growers, it seems as if no further improvement could hardly be expected: something novel, therefore, must now be introduced, to keep up the zeal of amateurs, and these fancy varieties are becoming eagerly sought after. It cannot be denied that their brilliant colors, and irregular form, have much to commend them, though they are the very reverse of what has been heretofore, and still is, considered essential to a fine pelargonium. In the place of the perfect outline of petal, these fancy ones are deeply lobed and irregular; and the exquisite pencilling gives way to abrupt terminations of color. The names indicate their character, for they are essentially the Clown and Harlequin of the tribe. We hope these varieties will soon be introduced, that our amateurs may have an opportunity to compare their attractiveness with the fine sorts which now enrich our collections. (*Flore des Serres*, August.)

REVIEWS.

ART. I *European Agriculture and Rural Economy, from Personal Observation.* By HENRY COLMAN. Vol. II. Parts IX. and X. 8vo. pp 371, to 598. Boston, 1848.

MR. COLMAN'S European tour has at last been brought to a close. Nos. IX. and X. completing the work, have been some time before the public, but we have not found time to notice them. So far as we have had leisure to examine this double number, it exceeds in interest any of the previous ones, and is a capital ending to a work well begun, and successfully carried through.

The number is prefaced by several pages of preliminary observations, upon the important subject of agriculture,—the means for its improvement,—and the necessity of its protection by government; and we cannot omit the following extract which, it seems to us, is deserving of the attention of every individual who has a proper appreciation of the importance of agricultural art:—

“ We may be told, that agriculture is a purely material and sensual art, and does not deserve a place among the humane arts. To a mind material and sensual in all its habits, every thing becomes material and sensual in the lowest and most degrading sense of those terms. But its rational pursuit is not incompatible with high intellectual attainments, and the most refined taste. Whatever occupies and absorbs the mind exclusively, is, of course, unfavorable to any great excellence in other pursuits. Agriculture, pursued as a mere branch of trade or commerce, or a mere instrument of wealth, will be found to have influences upon the mind, narrowing and restricting its operations and aspirations, corresponding with any other of the pursuits of mere avarice and acquisition, and which even those of the learned professions, when pursued wholly with such views, are sure to have. But, when followed without exclusive views to mere gain or profit, it is far from being incompatible with a high state of intellectual cultivation. Many of the sciences are the handmaids of agriculture, and serve, as well as ennoble it. Its practical pursuit, though it occupies, yet it does not exhaust, the mind; but, within certain limits, inspirits and invigorates all its faculties. A spiritual mind may spiritualize all its operations; a religious mind sees, in its wonderful and curious processes and their marvellous results, many of the adorable miracles of a beneficent Providence. That a profound study of the agricultural art, and an intimate acquaintance and familiarity with its practical details, are not incompatible with a high degree

of intellectual improvement and cultivation, we have too many living examples of this union to leave us to doubt; and the immortal names of Cicero, Bacon, and Washington, show, from their own assertions, that minds, highly gifted of Heaven, have found their richest pleasure in rural and agricultural occupations and pursuits; and, in company with many others, in ancient and modern times, form a magnificent constellation of learning, genius, and taste, shedding their splendor upon this useful art."—pp. xiii. xiv.

These numbers are wholly devoted to Continental agriculture; viz., that of France, Belgium, Flanders, and Switzerland; giving a full account of the crops generally produced—the markets—live stock—dairies—and especially manures. Among the varied subjects, it is very difficult to make extracts, and, with the exception of the closing remarks, we must therefore refer the reader to the work itself:—

"I must add, in the next place, that I should be glad to see the cultivation of the vine extended in the United States. In many parts of France, Germany, and Switzerland, it occupies land, steep acclivities, heights wholly inaccessible to a horse or cart, and where the manure is always carried up, the produce brought down, and sometimes the very soil in which it grows, transported by hand. There is land enough in the United States for its cultivation without such extreme toil. As an article of commerce, it would probably prove lucrative; and, as an article of comfort, perhaps few are more grateful and harmless. I speak, in this case, of the light wines of France, which do not intoxicate, unless drunk to beastly excess. The strong wines of Spain and Portugal are made, by some factitious process, and charged with brandy; but the light wines of France, being the pure juice of the grape, exhilarate, but do not intoxicate. They take the place of tea and coffee among the laboring people, and constitute an innocent alleviation of their severe toil. I should be sorry in any way to abridge these comforts, especially as I may say in truth, after travelling a long distance in the wine-growing districts, and at the time of the wine-making, or vintage, when it is to be had in the greatest abundance, that I saw no drunkenness or intoxication in any degree; and I may add, that, so far as my observation goes, there is not a more temperate people, than are to be found in the wine-growing departments of France.

I need not add, that, under the auspicious circumstances in which the United States are placed, her agriculture must be constantly increasing in importance to the country itself, and to the civilized world, for her commerce penetrates every sea, and her bread-grains, as they have already done, may be of immense importance, and of indispensable necessity, in feeding the inhabitants of the old world.

This completes the task which I undertook of giving, from personal observations, an account of European Agriculture and Rural Economy. I commend my work to the indulgence and candor of my readers. It was an

undertaking too great for an individual to accomplish as one would desire that it should be done. It must satisfy me, I hope it will satisfy my friends, that I have, with unceasing anxiety, sought to execute it as well as I could. It was not to be expected that I should give a complete system of agriculture; but I have constantly endeavored to collect and present that information which would be most useful; and to convey it in a simple and practical form. I have omitted many circumstances, because they are well known. I have given full details wherever I thought they were required. As to my opinions on any subject upon which I have treated, I can only answer that they are my own; that I am quite ready to yield them, when I find, upon further information, reason so to do; and, above all, that my opinions or judgments do not encroach upon the personal right of independent judgment and opinion in any and all others.

European agriculture lays under many burdens, from which the United States are free, and I pray may long remain so. The weight of taxation in most of the countries of Europe is very oppressive. The unproductive classes are numerous to an excess. Immense standing armies; governments enormously expensive, and in a great measure irresponsible to the people; ecclesiastical establishments, and their attachés, demanding large contributions from labor, and returning, in many cases, little more in value than the bishop's blessing in *Æsop's* fable, are all to be sustained from the soil, and by the labor, of those who cultivate it. In their present exemption from these burdens, the farmers of the United States are greatly blessed. May they duly appreciate their singular advantages, than which none greater ever fell to the lot of man in his social condition. To them we may apply the beautiful line of the immortal poet—

O! ter beati Agricola, si sua bona nōrint.*—pp. 596-598

We fear, if this was not the closing number, some of Mr. Colman's readers would "stop their subscription," for in these days—to recommend the culture of the grape for the manufacture of wine, would bring down, upon the writer, the indignation of some of our philanthropists, who look upon the grape as the remote cause of all the intemperance of the age. We, however, agree with Mr. Colman, and we trust we may see that time arrive, when the importation of wine will be among the things that were.

The work forms two volumes, of upwards of 500 pages each, illustrated with many fine copper-plate engravings—printed on superior paper, and in a neat bold type—and will form a valuable acquisition to the library of every farmer.

* Think happy farmers, if they only knew their blessings.

MISCELLANEOUS INTELLIGENCE.

ART. I. *General Notices.*

Cultivation of Celery.—It is well known, in these exhibition days, that much of the gigantic celery which finds its way to market, or appears at our public exhibitions, is (although so specious in appearance,) exceedingly coarse and fibrous. It moreover has a constant tendency to "run to seed," before even winter sets in: and then, of course, loses that delicate tenderness of texture, for which celery is so much esteemed. Now, although it is quite commendable to encourage size, at an exhibition, it does not follow, that the mode employed to produce such enormous stalks, must be implicitly followed by those whose office it is to provide choice salads for the wealthy, whose taste, in matters of the kind, is not always identical with that of the inhabitants of busy towns; the latter, in their marketing matters, not unfrequently prefer bulk to quality.

I presume it will be readily conceded, that rapid growth is the principle which most conduces to tenderness in vegetables; and that any mode of culture, which produces an unusual bulk of material, through very early sowing, must, in a proportionate degree, deteriorate the character of the production. One of the first points to which I would respectfully direct attention, in order to obtain tender, crisp, and good-keeping celery, is to sow it much later than usual, and to cultivate it very highly afterwards; never, if possible, suffering it to receive a check of any kind. A very small sowing, to obtain a little very early celery, may be made in the early part of February; but, for the principal supply, the beginning of April will suffice, provided the maxim be put in full practice.

This plant is such a gross feeder, that mere soil in the seed-bed, be it ever so good, will not suffice alone to carry out these principles. It should always be sown in contact with a thin layer of very rotten manure; and, above all things, kept constantly moist. It is, moreover, generally sown much too thick; and this frequently arises from the want of frame-room; most gardeners preferring to sow it in a hot-bed frame. There is, however, no absolute necessity to rear it in a frame, if sown as here recommended; I have raised my main crops for years—even in this northern climate—on open but elevated beds, in the open garden. True it is, the young plant requires some nursing, and much attention in guarding it from the snails and slugs; this, however, presents no obstacle worth consideration.

My practice is to apply liquid manure occasionally, to this late sowing, or, at all events, to keep the beds constantly moist. The importance of an abundant supply of moisture, is pretty well known—especially during hot weather, when it is barely possible to keep it too wet. This was long since shown by the late Mr. Knight, who, taking into consideration the circumstance of its being, as to its native habits, a ditch plant, shaped his course of culture accordingly.

As soon as the young plant can be handled with convenience, transplanting must take place; and this part of the cultivation must be performed with much care. Elevated beds should be had recourse to as a guarantee, against battering storms, the young plant being exceedingly liable to "choke" during heavy rains. These beds should be thoroughly pulverized, and after this process—being duly marked out—a coating of rotten manure should be spread over the surface, two inches in thickness, and a casing of the ordinary soil strewn over this, about an inch in thickness.

The soil being neatly levelled, a light roller may be passed over the bed, in order to make a close and even surface; or, in default of a roller, the soil may be patted with the spade; this precaution will prevent injury from storms. By a kindly attention, the plants will be ready for final transplanting, in about a month, and no delay must be permitted in this matter, as it is well known, in these days, that a sudden check, after very rapid growth, induces the formation of blossoms; or, in technical terms, as applied to the celery, causes the plant to "run." The smaller the plant, therefore, at this removal, the better, provided it is stout and of a dark-green color.

The mode of culture in drills, or by the Scotch bed mode, is so well known, that I need say nothing here on that head; some persons prefer the one mode, some the other. This, however, depends in part, on the scheme of rotation pursued; and, for my part, I prefer the Scotch, or bed mode; for, strange to say, I take my main crop of peas off the ground intended for celery, previously. The peas are chiefly of the Imperial class, which, it is well known, produce a glut, and are speedily off the ground.

By sowing two rows of peas at a time, I obtain ground on the removal of each pair of rows, for a six feet celery-bed: such ground has usually been much exhausted by the Brassica tribes, previous to the peas, and I use the celery as a restoring crop.

Whatever mode be adopted, it should be borne in mind, that moisture, during hot weather, is as necessary here, as in the seed-bed. Much care is requisite, in "soiling up." I have known excellent crops spoiled by neglectful laborers; and the first soiling, in general, determines whether it shall be straight or crooked. The principle of soiling has been much misunderstood, in many instances; some persons neglecting it for a long period, and laying on a most unwarrantable load, by which the whole plant becomes suddenly paralyzed.

Celery should be soiled little and often—a little once a fortnight, at furthest; and the plant should be allowed a firm footing, before the first soiling takes place. In the middle of November, it should be soiled in an extra manner, as protection against frost, and the soil pressed very close. I consider the Manchester red the best for the earliest crop, but Seymour's white will keep the longest.—(*Journal of Horticultural Society*, Vol. III. p. 297.)

Management of Fruit Trees.—At this season, when flowers demand comparatively little attention, the time of the amateur is required by the fruit trees in his garden. Now that the year's growth is completed, and the fo-

liage has fallen, the training of the tree should be attended to, in reference both to its bearing fruit, and its future development. Former papers in the *Chronicle*, have fully explained the general principles of pruning, in reference to different trees, and we refer to them for that instruction, which young gardeners may need. Every thing of this kind should be done now, excepting the nailing of trees to walls, which, physiologists say, should be left as long as possible. Nature appears to confer benefits on trees, by the constant motion of their branches, in the wintry winds, and the process of nailing in, attended to early, deprives them of this. It has been thought, that the tendency of wall trees to canker, is to be attributed, in part, to the unnatural position they are fixed in. It is as well, therefore, to leave this part of gardening labor until the spring, unless the garden is very large, when, of course, work must be done, when there is an opportunity. All pruning, however, may be got under at once. Espaliers and standards, should be carefully trained, and kept in an orderly and elegant form. The latter are too much neglected in gardens. When young, standard trees receive supervision, but when they become older and more valuable, they are slighted. The centres become filled with small spray, by which air and light are kept from a large portion of the tree. The knife should be used to clear this away, and, also to remove all dead branches. Any time, when there is no hard frost, will be favorable for this work.

The quarters devoted to gooseberries and currants should now be dug, a good coating of well rotted manure, being mixed with the soil, as you proceed. The bushes should now be pruned, if you can adopt measures to scare away birds from the buds, otherwise, you had better wait until February. If a bush is now cleared from all useless wood, facility is given for the entrance of the winged depredators, and you may find your trees quite destitute of buds in the spring. By leaving them unpruned, an entrance is in many cases prevented, and, at all events, you can regulate your pruning afterwards, by the state of the buds. However, it is better to get the work done now, and take measures to keep the birds away, during the winter. A mixture of cow dung, soot, and lime, put on with a plasterer's brush, I have found effectual; I am not quite sure that white washed is not equally potent to keep off the thieves. If your stock is not very large, try both, and you will be sure of success. When the snow is on the ground, keep a look out, and the occasional use of a gun will be beneficial.

In order to have a succession of young bearing trees, of various kinds, the gardener should every year displace some old worn-out subject, for one just entering on its prime. It is bad management to allow all the fruit trees of a garden, to grow hoary together. Good gardeners are always shifting, and by this means they secure health and plenty. Raspberries, currants, and gooseberries, allow of this treatment, especially, since they so rapidly come to perfection.—(*Gard. Chron.*, 1848, p. 829.)

Culture of the Azalea.—At this gloomy season of the year, we are often cheered by thinking of the treasures which are preparing to display themselves, when a few weeks shall have brought more light and a higher temperature. The buds of hyacinths and early tulips, are ready to burst their

cells, and already a shade of purple, or crimson, or white, gives an indication of what is to be. This is especially the case with the azalea, whose stems are now covered with the buds, which, in the spring, will form one mass of beauty.

The azalea is propagated by seeds for obtaining new varieties, or for stocks for grafting the finer sorts upon; by inarching or grafting, when the tender kinds may be strengthened by being united with those which are more robust; and by cuttings, which is the more common and expeditious process, for raising young plants. A soil composed of peat and sand, in equal quantities, is the best, and the cuttings should be covered with hand-glasses, until struck. The best time is when the parent plants are in the most vigorous growth, for the cuttings, partaking of that vigor, will more readily emit roots, than when the vital juices are inspissated and comparatively motionless. When struck, the young plants must have every advantage of light and air, and frequent shiftings, to secure a vigorous development, until they come into bloom. The after treatment then divides itself into two parts, suggested by the distinction pointed out by nature, between the seasons of activity and rest, which all vegetation demands. As growth commences immediately after blooming, the plants should be repotted then, all the flower-stems being cut off, to prevent the energies of vegetable life going for the production of seeds. The most appropriate soil consists of about six parts of heath mould, in which there is a large portion of vegetable matter, one part of sandy loam, and one of sand. Great care is requisite in potting, both as to the size of the pots, and the disposition of the roots, which are very fine, and of a hair-like texture. They must be disposed as equally as possible, in all directions, that the spongioles may not be crowded together, but may absorb equally, the matters requisite for the vigor of the plant. Good drainage must be secured, varying, however, according to the habits of the plants. Some are semi-evergreen, while others are decidedly deciduous; the former will require larger pots, and more drainage than the latter.—(*Gard. Chron.*, 1848, p. 845.)

ART. II. Domestic Notices.

Annual Fair of the New York State Agricultural Society.—The Society have decided upon holding their next fair at Syracuse, on Tuesday, Wednesday, and Thursday, the 11th, 12th, and 13th of September next. A list of premiums has been published, which we shall notice more particularly in our next. It is gratifying to us to see that the Society have included copies of our *Fruits of America* among the horticultural premiums, to be awarded at the fair.—*Ed.*

Twenty-First Annual Exhibition of the Massachusetts Horticultural Society.—The next annual exhibition of the Society, will be held on Tuesday, Wednesday, Thursday, and Friday, the 18th, 19th, 20th, and 21st of September next. The Society have also decided to hold a semi-annual exhibition of flowers and fruits, in June, at the time of the general bloom of

roses, about the 25th of the month. The flower committee are to report a list of premiums, and to give due notice of the days of exhibition.—*Ed.*

Blight in Pear Trees.—I perceive, by the article "Blight in Pear trees, by Mr. James," in the January number, that that subject is likely soon to be better understood, and, like the strawberry question, will cease to create any "difference of opinion." I, however, differ with most writers on the subject, as I am of the belief, that it is neither "insect blight," frozen sap-blight, nor "winter blight," but—*summer blight*—brought on after a spell of damp, moist, or wet and cool weather, occasioning a superabundant flow of sap in the trees, and then one of our sudden changes—a hot and burning sun, acting upon the bark of the tree,—and *scorching*, as it were, the sap under the bark. I have not time to write you a long article, to sustain my views at present, but may do so hereafter. If Mr. James supposes the disease to be the cause of cold—why does he call it "fire blight?"—*Yours, J. B. Garber, Columbia, Pa., Feb. 1, 1849.*

[We are nearly of the same opinion as Mr. Garber; we are certain that the blight, so called, is not caused by cold, and that it is the result of heat, and not frost. As we have before stated, we have our own views to offer, at a future time, when we have collected a few more facts, and, in the mean time, we trust Mr. Garber will send us the article he alludes to.—*Ed.*]

North American Pomological Convention.—Agreeably to the vote of the Pomological Convention, assembled at Buffalo, last September, the committee, who were appointed for that purpose, have issued a circular, calling the *second session* of the convention, under the above name, to be held in New York State, in September next, immediately after the annual meeting of the New York State Agricultural Society. Since the circular was issued, the Society have decided upon holding the fair at Syracuse, on the 11th, 12th, and 13th of September next, and the Pomological Convention will, therefore, assemble immediately after, on Friday, the 14th, and continue in session three or four days. The circular is as follows:—

"The committee of the North American Pomological Convention, held at Buffalo, in the State of New York, in the month of September, 1848, who were empowered to devise such plans as they might deem necessary, to carry out the objects designed by the members thereof, have concluded, as part of such plan, to appoint fruit committees of five—or more—gentlemen from each State, and the Canadas, whose duty it shall be, to report the result of their observations and consultations to the convention, at its assemblage, in 1849. The committee take the liberty of sending to each member of a State committee, the following rules for their guidance, in attending to the several duties assigned them; and they sincerely hope, that all who have been selected to attend to these duties, will cordially co-operate with them, in their endeavor to gather such a mass of information, as may prove of importance to the fruit-growing interests of this continent.

Albany, January 1st, 1849.

INSTRUCTIONS TO COMMITTEES.

1st. The chairmen are requested to notify the other members of the committees, of their selection; they are requested to call them together, as

often as necessary, in order that they may be enabled to consult on the various matters referred to them; they are empowered to supply vacancies in the committees,—which should consist of at least five members,—with such gentlemen as they may deem competent, from various parts of their respective States, and, if it is impossible, from any cause, for a committee to assemble together, the chairmen are requested to communicate with the several members thereof, by letter.

2nd. Each member of a State committee is requested to collect all the information in his power, as to the value of various varieties of fruits, in his particular section of a State, he is specially requested to designate such as have proved to be worthless, specifying the particular disease or diseases, to which the fruit or tree may be subject, or any other objectionable information in regard to them, and, in giving this information, he is requested to state, as nearly as possible, the character of the soils in which the trees may be growing, when they prove invaluable or *vice versa*; the chairmen of the respective committees are requested to embody all this information in their reports, specifying the particular locality of the State from whence it comes, and also giving the name of the member of the committee, from whom it may be derived.

3d. If, in either of the several States or provinces, there are new and valuable seedling varieties of fruits, not already described or known to the pomological world, and which, in all their characteristics, will bear a strict application of rule first, adopted by the convention; the committees are requested to describe and name them in their reports.

4th. If neither the chairman, or any other member, of a State committee, can make it convenient to attend the sitting of the North American Pomological Convention, in the autumn of 1849, the said chairman is hereby requested to transmit his report, by mail, to B. P. Johnson, Esq., Secretary of the New York State Agricultural Society, at Albany, as early as the first day of September, 1849, in order that it may be laid before the convention, on the first day of its session.

Committees of five or more persons are appointed from each State in the Union, and the list is so long, we have not room to copy it entire; we therefore give the name of the *Chairman* from each State.

MAINE.—Dr. E. Holmes, Augusta.

NEW HAMPSHIRE.—S. E. Cones, Portsmouth.

VERMONT.—C. Goodrich, Burlington.

MASSACHUSETTS.—Gen. H. A. S. Dearborn, Roxbury.

RHODE ISLAND.—S. H. Smith, Providence.

CONNECTICUT.—S. D. Pardee, New Haven.

NEW YORK.—Herman Wendell, M. D., Albany.

NEW JERSEY.—Roswell L. Colt, Esq., Paterson.

PENNSYLVANIA.—Wm. H. Dillingham, Philadelphia.

DELAWARE.—Hon. J. M. Clayton, Wilmington.

MARYLAND.—C. B. Calvert, Esq., Prince George Co.

DISTRICT OF COLUMBIA.—G. Riggs, Esq., Washington.

VIRGINIA.—Yardley Taylor, Esq., Purcell's Store, P. O.

NORTH CAROLINA.—Sydney Weller, Brinckleyville, Halifax Co.

SOUTH CAROLINA.—Wm. Summer, Pomaria.

GEORGIA.—Daniel Lee, M. D., Augusta.

ALABAMA.—R. Haswell, Mobile.

LOUISIANA.—Dr. Miller, New Orleans.

MISSISSIPPI.—M. W. Phillips, M. D., Edwards Landing.

ARKANSAS.—Col. J. B. Flournoy, Little Rock.

MISSOURI.—Reuben Knox, M. D., St. Louis.

WISCONSIN.—F. K. Phoenix, Esq., Delavan.

IOWA.—H. Gates, Esq., Burlington.

OHIO.—Prof. J. P. Kirtland, M. D., Cleveland.

MICHIGAN.—Dr. J. C. Holmes, Detroit.

INDIANA.—J. D. G. Nelson, Fort Wayne.

ILLINOIS.—J. A. Kennicott, M. D., Chicago.

TENNESSEE.—T. Fanning, Franklin College.

KENTUCKY.—H. P. Bryam, Esq., Louisville.

CANADA EAST.—Hon. James Leslie, Montreal.

CANADA WEST.—James Dougall, Esq., Amherstburgh.

NEW BRUNSWICK.—Joseph Walton, Esq., St. Andrews.

We are glad to announce the second meeting of the convention, and, from the reputation of the gentlemen who have been appointed State committees, we are assured that the occasion will be one of very great importance, and attended with the happiest results. The city of Syracuse, where the convention is to be held, is one of the most central points which could have been selected, both for the Western, as well as the New England, States, and we trust to see a full assemblage of members, who will come prepared to achieve all that the most ardent friends of pomological conventions have anticipated.

ART. III. *Massachusetts Horticultural Society.*

Saturday, December 30th, 1848.—The several committees on flowers, fruits, and vegetables, having made their reports, awarding premiums for the year 1848, they were presented to the Society, and ordered to be printed. [These were published in our February number.]

The executive committee recommended the following gentlemen as honorary members, and they were duly elected :—

James K. Polk, President of the United States.

Gen. James Tallmadge, President of the American Institute.

Hon. R. C. Winthrop, Speaker of the House of Representatives.

Hon. Joel Parker, LL. D., Royal Professor of Law, at Harvard College.

Caleb Cope, Esq., President of the Pennsylvania Horticultural Society.

Lawrence Young, Esq., President of the Kentucky Horticultural Society.

Joel Rathbone, Esq., President of the Albany and Rensselaer Horticultural Society.

Thos. Allen, Esq., President of the St. Louis Horticultural Society.

James W. Thompson, M. D., Wilmington, Delaware.

Prof. A. Agassiz, Cambridge, Mass.

Hon. Edmund Burke, Comm. of Patents, Washington, D. C.

Rev. Jas. Means, Dorchester, Mass.

H. W. S. Cleaveland, Burlington, N. J.

Meeting dissolved.

January 6th, 1849.—The first stated quarterly meeting of the Society was held to-day ;—President Wilder took the chair, and introduced his successor, Mr. Walker, as follows :—

Gentlemen of the Massachusetts Horticultural Society,—

The duty of introducing my successor, your President elect, devolves on me under very happy auspices—your suffrages have fallen on a man, who is worthy of the office, and well qualified for it—on one who has served the Society, in various capacities, with fidelity and ability, and whom you now reward with the highest honor in your gift.

Gentlemen,—I rejoice with you in this event, and in the prosperous condition of our Association—in the friendship and unanimity that prevails among us, and especially in an opportunity, before taking final leave of the Chair, to thank you once more, most sincerely, for the distinction which you have bestowed on me—a distinction for which, at my first election, I had not presumed to hope, but which, having been so often conferred, and by those whose approbation I highly appreciate, I shall ever regard as above any earthly preferment.

During my administration, it has been my desire and endeavor to discharge the duties of my office, with impartiality, and with a view to the best interests of the Society. How well I have succeeded, I leave for others to judge ; but, whatever success may have attended these efforts, for you, my official associates, with whom I have had such long and pleasant intercourse, and from whom I have received uniform and cordial support, I shall ever entertain an affection next to that for family and home.

Gentlemen,—may a kind Providence bless you in your persons, in your families, and in all your laudable efforts to extend the usefulness, and to increase the resources, of this institution ; and may he, who is now to occupy this chair, prove more worthy of the confidence and respect, you have so liberally bestowed upon me.

To which Mr. Walker replied in the following appropriate address :—

Gentlemen of the Society :—

The very kind manner in which my friend, Col. Wilder, has introduced me, and his determination, if it were possible, to lay me under further obligations, by his courtesy, and his avowed approbation of my past services, happily afford me an opportunity to state how much I value his friendship—the pleasure it has given me to serve the Society, under his administration, and to tender you, Gentlemen, my thanks, for the honor you have conferred upon me.

I cannot plead that I am ignorant of the duties, or the responsibilities, of the office to which you have elected me, but, in the same spirit of frankness, permit me to say, that I have many misgivings as to my ability to discharge them, in such a manner, as may be acceptable to you, Gentlemen, or that I shall be able, in any way, to aid, or promote, the progress and prosperity of the Society.

When I turn to the records of the Society, to read the doings, and remember the talents, of those who have heretofore occupied this chair, and more particularly, the eminent practical services of my immediate predecessor, I have good reason for fear, as regards my own services. But, with you, gentlemen, I have been accustomed to labor ; it is therefore almost unnecessary for me to say, that, for the future, I shall hope and expect to receive the same indulgence, you have so often and so kindly extended to me, during a period of nearly twenty years. With these expectations, I enter upon the duties assigned to me, with a determination, on my part, to co-operate with you, in as liberal an administration of the Society, as may be consistent with strict economy, and its future interest.

I shall take an early opportunity to submit, for your consideration and action, an

outline of such measures, as shall appear to me calculated to promote the further consolidation and usefulness of the Society.

United as we now are, as members, still encouraged by the co-operation of friends, and enjoying the liberal benefactions of our honored donors, I trust our future will be full of usefulness, and that our efforts may advance the object for which we are associated.

Gentlemen,—When the time shall arrive, that these new relations, which are formed to-day, should be dissolved, may it find us the same united and prosperous Society, strong in mutual friendship and esteem.

Mr. French presented some resolutions, complimentary to the President, and also the following votes, which were passed unanimously :—

Voted, That the thanks of the Society be tendered to M. P. Wilder, Esq., for his services, during the period he was President thereof, and also

Voted, That a committee of three be appointed by the chair, to purchase a piece of plate, not exceeding in value, *one hundred and fifty dollars*, and cause a suitable inscription to be placed thereon, and to present the same, with the above vote of thanks, to M. P. Wilder, in behalf of the Society, as a tribute of regard and esteem of its members.

The chair appointed the following gentlemen as the committee. Messrs. B. V. French, Newhall and Cabot.

Mr. C. M. Hovey presented the following Vote, which was passed unanimously :

Voted, That the Society's gold medal be presented to Gen. H. A. S. Dearborn, the first President of the Massachusetts Horticultural Society, for the essential services he rendered to the science of horticulture, and the interests of the Society, during the period he presided over its affairs ; and that a committee of three be appointed by the chair, to carry out the above vote.

The chair appointed Messrs. C. M. Hovey, C. Newhall, and E. M. Richards as the committee.

Dr. E. Wight proposed the following resolutions :—

Resolved, That the thanks of this Society be tendered to Mr. J. E. Teschemacher, for his valuable services, as corresponding secretary, for many years, and as chairman of the committee of publication.

Resolved, That, as a token of approbation and respect, and in consideration of these services, that a piece of silver plate, of the value of *fifty dollars*, be presented to Mr. Teschemacher ; or such other article of like value, as he may please to designate, and that a committee of three be appointed by the chair, to carry these resolutions into effect.

Messrs. Wight, Stickney, and Dutton, were appointed this committee.

The Committee of Arrangements, for the next annual exhibition, was chosen at this meeting :—

Messrs. Lovett, P. B. Hovey, Jr., and O. Johnson, were appointed a committee, to retire and nominate a committee, consisting of thirteen members, and they reported the names of the following gentlemen, who were elected :—

Joseph Breck, Chairman ; Messrs. F. W. Macondray, D. Haggerston, A. D. Williams, Jr., J. S. Cabot, O. Johnson, P. B. Hovey, Jr., E. Wight, J. F. Allen, J. Lovett, 2d, Capt. W. H. Austin, A. D. Weld, H. W. Dutton.

On motion of Mr. Newhall, it was voted, that the donation of Mr. Appleton, amounting to two hundred dollars, be placed at the disposal of the library committee.

The committee on finance, and the committee on the library, reported in part, and further time was granted, to complete their reports.

The executive committee submitted a schedule of premiums for 1849, which was accepted, and voted to be published.

Adjourned two weeks, to January 18th.

LIST OF PREMIUMS FOR 1849.

The prospective premiums are the same as for 1848, which will be found in our last volume, (XIV., p. 131.)

PREMIUMS FOR FRUITS.

Amount appropriated, Four Hundred and Fifty Dollars.

PREMIUMS DURING THE SEASON.

For the best and most interesting exhibition of Fruits, during the season, the Lowell Plate, valued at	\$20 00
For the second best,	12 00
For the third best,	8 00
APPLES. —For the best twelve Summer Apples, on or before the last Saturday in August,	
For the next best,	6 00
For the best twelve Autumn Apples, on or before the last Saturday in November,	4 00
For the next best,	6 00
For the best twelve Winter Apples, on or before the last Saturday in December,	4 00
For the next best,	6 00
BLACKBERRIES. —For the best specimens, not less than two boxes,	5 00
For the next best,	3 00
CHERRIES. —For the best specimens, not less than two boxes,	6 00
For the next best,	4 00
CURRENTS. —For the best specimens, not less than two boxes,	5 00
For the next best,	3 00
FIGS. —For the best twelve specimens,	5 00
For the next best,	3 00
GOOSEBERRIES. —For the best specimens, not less than two boxes,	5 00
For the next best,	3 00
GRAPES. —For the best specimens, grown under glass, on or before the first Saturday in July,	10 00
For the next best,	7 00
For the best specimens, grown under glass, subsequently to the first Saturday in July,	10 00
For the next best,	7 00

For the best specimens of Native Grapes,	\$5 00
For the next best,	3 00
MUSK MELON. —For the best Musk Melon, on or before the last	
Saturday in August,	5 00
For the next best,	3 00
NECTARINES. —For the best twelve specimens,	6 00
For the next best,	4 00
PEACHES. —For the best twelve specimens, grown under glass, on-	
or before the second Saturday in July,	6 00
For the next best,	4 00
For the best twelve specimens, grown in open culture,	6 00
For the next best,	4 00
PEARS. —For the best collection, not exhibited before this year,	
with a written description of the same, the Society's Plate,	15 00
For the next best,	10 00
For the best twelve Summer Pears, on or before the last Sat-	
urday in August,	6 00
For the next best,	4 00
For the best twelve Autumn Pears, on or before the last Sat-	
urday in November,	6 00
For the next best,	4 00
For the best twelve Winter Pears, on or before the last Sat-	
urday in December,	10 00
For the next best,	6 00
PLUMS —For the best specimens, not less than two boxes,	6 00
For the next best,	3 00
QUINCES. —For the best twelve specimens,	5 00
For the next best,	3 00
RASPBERRIES. —For the best specimens, not less than two boxes,	5 00
For the next best,	3 00
STRAWBERRIES. —For the best specimens, not less than two boxes,	6 00
For the second best,	4 00
For the third best,	3 00

☞ The Prizes and Gratuities will be awarded on the following days :—
 For Cherries, Gooseberries, forced Grapes, forced Peaches, and Strawber-
 ries, on the last Saturday in July.
 For Summer Apples, Blackberries, Currants, Musk Melon, Summer Pears
 and Raspberries on the last Saturday in August.
 For Foreign and Native Grapes, Nectarines, Peaches, and Plums, on the
 last Saturday in October.
 For Autumn Apples, Figs, Autumn Pears, and Quinces, on the last Sat-
 urday in November.
 For Winter Apples, Winter Pears, New Pears, and for the "Exhibition
 during the season," on the last Saturday in December.

☞ Competitors for Prizes are particularly referred to the Rules and
 Regulations which will be strictly adhered to by the Committee.

TO BE AWARDED AT THE ANNUAL EXHIBITION IN SEPTEMBER.

APPLES. —For the best twelve varieties, of twelve specimens each,	
the Society's Plate, valued at	\$20 00
For the second best,	12 00
For the third best,	8 00
For the best dish of Apples, twelve specimens, of one variety,	6 00
For the next best,	4 00
PEARS. —For the best twelve varieties, of twelve specimens each,	
the Lyman Plate, valued at	20 00
For the second best,	12 00
For the third best,	8 00
For the best dish of Pears, twelve specimens of one variety,	6 00
For the next best,	4 00
ASSORTED FRUIT. —For the best basket of Fruit, of various kinds,	
For the second best,	10 00
For the third best,	7 00
For the third best,	5 00
GRAPES. —For the best five varieties, two bunches each, the Ly-	
man Plate,	15 00
For the second best, the Bradlee Plate,	10 00
For the best two varieties, two bunches each,	7 00
For the second best,	5 00

\$450 00

These premiums will be awarded on the first day of the exhibition.

PREMIUMS FOR PLANTS, FLOWERS, AND DESIGNS.

Amount appropriated, Six Hundred and Fifty Dollars.

DISPLAY OF GREENHOUSE PLANTS, IN POTS, THROUGH THE SEASON.

For the best display of Greenhouse Plants, in pots, through	
the season, the Appleton Gold Medal, valued at	\$25 00
For the second best display, the Society's Silver Gilt Medal,	
valued at	15 00

DISPLAY OF GREENHOUSE PLANTS, IN POTS.

To be exhibited at the opening of the Hall, on the 1st Saturday in May:—

PELARGONIUMS. —Class I.—For the best six new and rare varie-	
ties, grown in eight inch pots,	6 00
For the second best,	4 00
Class II.—For the best six varieties of any sort, grown in large	
pots,	6 00
For the second best,	4 00
ROSES. —For the best six varieties of Tea, Bourbon, Noisette, or	
Bengal,	6 00
For the second best,	4 00
For the third best,	2 00
CUT FLOWERS. —For the best display, a premium of	
For the second best,	3 00
For the second best,	2 00

FUCHSIAS. —For the best six varieties, a premium of . . .	\$6 00
For the second best,	4 00
CACTUS. —For the best six varieties, a premium of . . .	3 00
For the second best,	2 00
CALCEOLARIAS. —For the best six varieties, a premium of . . .	3 00
For the second best,	2 00
CINERARIAS. —For the best six varieties, a premium of . . .	3 00
For the second best,	2 00
HEATHS. —For the best varieties, a premium of . . .	3 00
For the second best,	2 00
VARIOUS SORTS. —For the best display of various sorts of Green-house Plants, not less than twelve pots, . . .	8 00
For the second best display,	5 00
HYACINTHS. —Premiums to be awarded second Saturday in May.	
For the best display, not less than twenty varieties, . . .	5 00
For the second best,	3 00
TULIPS. —Premiums to be awarded the third Saturday in May.	
For the best thirty distinct varieties, a prize of . . .	8 00
For the second best	6 00
For the third best,	3 00
PANSIES. —Premiums to be awarded the fourth Sunday in May.	
For the best twelve distinct varieties, a premium of . . .	4 00
For the second best,	3 00
For the third best,	2 00
HAWTHORNS. —Premiums to be awarded the fourth Saturday in May.	
For the best display, a premium of	3 00
For the second best,	2 00
HARDY AZALEAS. —Premiums to be awarded fourth Saturday in May.	
For the best display, a premium of	5 00
For the second best,	3 00
SHRUBBY PEONIES. —Premiums to be awarded fourth Saturday in May.	
For the best six varieties, a premium of	5 00
For the second best,	4 00
For the best display,	3 00
HERBACEOUS PEONIES. —Premiums to be awarded second Saturday in June.	
For the best twelve flowers, having regard to the number of varieties,	5 00
For the second best,	4 00
For the best display,	3 00
PINES. —Premiums to be awarded third Saturday in June.	
For the best six distinct varieties, a premium of . . .	4 00
For the second best,	3 00
For the best display,	2 00
ROSES. —Premiums to be awarded third Saturday in June.	

Class I.—Hardy Roses.

For the best thirty distinct varieties, a premium of . . .	8 00
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For the second best,	\$6 00
For the third best,	4 00
For the best display,	3 00

Class II.

For the best twelve distinct varieties, a premium of	5 00
For the second best,	3 00
For the third best,	2 00

Class III.—*Perpetual Roses*.

For the best ten varieties,	5 00
For the second best,	4 00
For the best display,	3 00

Class IV.—*Prairie Roses*.

For the best display, not less than four varieties,	4 00
For the second best,	3 00

CARNATION AND PICOTEÉ PINKS.—Premiums to be awarded third Saturday in July.

For the best ten varieties, a premium of	5 00
For the second best,	4 00
For the best display,	3 00

MAGNOLIAS.—For the best display through the season, a premium of

For the second best,	2 00
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HARDY RHODODENDRONS.—For the best display of the season, .

For the second best,	2 00
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DOUBLE HOLLYHOCKS.—Premiums to be awarded third Saturday in July.

For the best display, a premium of	3 00
For the second best,	2 00
For the third best,	1 00

DOUBLE BALSAMS.—Premiums to be awarded 2d Saturday in Aug.

For the best display, a premium of	3 00
For the second best,	2 00
For the third best,	1 00

PELXES.—Premiums to be awarded third Saturday in August.

For the best ten distinct varieties, a premium of	6 00
For the second best,	4 00
For the third best,	3 00

GERMAN ASTERS.—Premiums to be awarded second Saturday in September.

For the best display, a premium of	4 00
For second best,	3 00
For the third best,	2 00

BOUQUETS, WREATHS, DESIGNS, &c.

Premiums to be awarded at the Annual Exhibition.

VASE BOUQUETS.—For the best pair suitable for the Bradlee Vases, a premium of the Bradlee Plate, valued at	10 00
For the second best,	6 00

For the best pair for the Society's Marble Vases, . . .	\$10 00
For the second best,	6 00
PARLOR BOUQUETS. —For the best pair suitable for the parlor, . .	8 00
For the second best,	6 00
For the third best,	5 00
For the fourth best,	3 00
POT PLANTS. —For the best display, of not less than twenty plants, .	12 00
For the second best,	10 00
For the third best,	8 00
For the fourth best,	5 00
COXCOMBS. —For the best six pots, a premium of	3 00
For the second best,	2 00
BALSAMS. —For the best six pots, a premium of	3 00
For the second best,	2 00
DAHLIAS. —Premiums to be awarded fourth Saturday in Sept.	

Division A.

PREMIER PRIZE. —For the best twelve dissimilar blooms, the Society's Silver Medal,	5 00
SPECIMEN BLOOM. —For the best flower,	3 00
VARIOUS COLORS. —For the best yellow, buff, or orange; purple or maroon; crimson or claret; very dark; white; edged or tipped, scarlet; pink or rose, a premium of \$1 00 each.	8 00

Division B.

Class I. —For the best twenty-four dissimilar blooms,	8 00
For the second best,	5 00
Class II. —For the best eighteen dissimilar blooms,	6 00
For the second best,	4 00
Class III. —For the best twelve dissimilar blooms,	5 00
For the second best,	3 00
HERBACEOUS PERENNIALS. —For the best display through the season, the Society's Silver Medal,	5 00
For the second best,	4 00
For the third best,	3 00
ANNUALS. —For the best display through the season, the Socie- ty's Silver Medal,	5 00
For the second best,	4 00
For the third best,	3 00
CAMELLIAS. —Premiums to be awarded second Saturday in Feb. For the best twelve varieties of cut flowers, with foliage,	8 00
For the second best,	5 00
CHINESE PRIMROSE. —Premiums to be awarded second Sat. in Feb. For the best six varieties in pots, a premium of	3 00
For the second best,	2 00
GREENHOUSE AZALEAS. —Premiums to be awarded 2d Sat. in March. For the best six varieties in pots,	6 00
For the second best,	4 00

SHRUBBY PLANTS. —For the best display, during the season, .	\$5 00
For the second best,	4 00
For the third best,	3 00

PREMIUMS AND GRATUITIES TO BE AWARDED AT THE WEEKLY EXHIBITIONS.

Amount appropriated, One Hundred and Thirty-Four Dollars, . 134 00

For the best six Pot Plants, of different varieties .	\$2 00
For the second best,	1 00
For the best large Bouquet for vases or parlor, com- posed of flowers gracefully arranged, .	1 00
For the best pair of Bouquets of any description, .	1 00

—————\$650 00

PREMIUMS FOR VEGETABLES.

Amount appropriated, One Hundred and Fifty Dollars.

ASPARAGUS. —For the earliest and best, not less than three bunches, .	\$5 00
For the second best, a premium of	3 00
BEETS. —For the best (pure blood beet,) during the season, not less than twelve roots, a premium of	3 00
BROCCOLI. —For the best three heads, a premium of	5 00
BEANS. —For the best and earliest peck of string beans,	3 00
For the best and earliest Lima beans, not less than two quarts, .	3 00
For the best and earliest variety of shell beans, a premium of .	3 00
CABBAGE. —For the best drumhead cabbage, during the season, not less than three heads, a premium of	5 00
For the second best,	3 00
For the best Savoy cabbage, during the season, not less than three heads, a premium of	3 00
For the second best,	2 00
CARROTS. —For the best exhibited, a premium of	2 00
CAULIFLOWERS. —For the best and largest, during the season, not less than three heads, a premium of	5 00
For the second best,	3 00
CELERY. —For the best and largest blanched, not less than six roots, .	5 00
For the second best,	3 00
CORN. —For the best and earliest sweet corn, not less than 12 ears, .	3 00
For the second best,	2 00
CUCUMBERS. —For the best pair under glass, previous to the first Saturday in June, a premium of	5 00
For the second best,	3 00
For the best and earliest of open culture,	3 00
FLOR PLANTS. —The best display during the season, a premium of .	5 00
For the second best,	2 00
LETTUCE. —For the best six heads, before the 1st Sat. in July, .	3 00
For the second best,	2 00
POTATONS. —For the best new seedling, of superior quality, for the table,	10 00

For the best and earliest peck, previous to August 1,	\$3 00
For the second best,	2 00
PEAS.—For the best and earliest peck in June, a premium of	3 00
RHUBARB.—For the largest and best, previous to the first Saturday in July, not less than twelve stalks, a premium of	5 00
For the second best, a premium of	3 00
SQUASHES.—For the best pure Canada squashes, not less than six in number,	3 00
For the greatest variety exhibited, during the season,	5 00
TOMATOES.—For the best and earliest, not less than one dozen,	3 00
VEGETABLES.—For the best display and greatest variety at the weekly exhibitions, during the season, a premium of	5 00
For the second best,	3 00
For the best display and greatest variety at the annual exhibition,	10 00
For the second best,	6 00
For any new variety of vegetables suitable for the table, and worthy of cultivation, other than seedling potatoes,	5 00
	<hr/>
	\$150 00

The regulations are nearly the same as last year, (Vol. XIV., p. 139.)

HORTICULTURAL MEMORANDA

FOR MARCH.

FRUIT DEPARTMENT.

Grape Vines, owing to the late very severe weather, have not advanced quite so rapidly as they otherwise would have done; but, as the sun is now higher, and warmer weather may soon be expected, they will, by the last of the month, show their clusters of fruit-buds. The vines should be tied up to the trellis, as soon as they are evenly broken; but as long as any of the eyes, which are wanted to form spurs, do not start, the end of the shoots may be left suspended, and this will have the effect of starting the dormant buds. Keep them well syringed, in all good weather, both morning and evening. The temperature should be from 50° to 55° at night, and a good abundance of air admitted on fine days. Cold houses will now need airing in warm days, or the vines may start too soon. Vines in pots may now be brought forward in a greenhouse, and an early crop be obtained. Cuttings may now be put in. Vines in the open garden should now be pruned; it is the best season when they have not been done in the autumn; no danger need be apprehended from a little bleeding.

Fig trees in pots, in the greenhouse, should now be liberally watered. Plants may be brought in for a succession.

Peach trees in pots, may yet be brought into the greenhouse, and the crop much forwarded.

Strawberries in pots, should be very liberally supplied with water, and kept near the glass. Seeds may be sown now in boxes.

Scions of fruit trees may yet be cut with perfect success.

Grafting. Where there is a great deal of grafting to be done, and only one hand to do it, the work may be commenced the last of the month.

Strawberry beds, if the spring should open early, will need looking after the last of the month.

Stakes, labels, grafting wax, &c., should be now got in readiness against the approach of good weather, when there will be no time to attend to these things.

FLOWER DEPARTMENT.

Camellias will now be growing freely, and should be syringed daily, and liberally watered at the root. Inarching may yet be done.

Japan lilies will be growing rapidly, and should not be forced on too fast; keep them in a rather cool situation. Water sparingly.

Pelargoniums will now be in fine condition, if they have been properly managed. The foliage should be dark green, and stiff, and the wood short-jointed and stocky. If wanted for blooming in May, keep the plants cool, and if the shoots are too forward, pinch off those which are taking the lead. Keep the branches well tied out, and cut them entirely out when too thick.

Azaleas will now be in full bloom, and may be liberally watered.

Dahlias may still be brought forward for early blooming.

Veronicas should now be shifted and headed in, if fine large specimens are wanted.

Roses will now be flowering, and should be liberally watered. Fumigate, to destroy the green fly.

Fuchsias should now be repotted, and the branches headed well in; they will then make fine specimens.

Calceolarias will now need repotting, if fine showy plants are wanted.

Calystegia pubescens should now be repotted, and placed in a warm situation, to give it a good growth.

Achimenes of all kinds, should now be potted off for early flowering.

Heaths, done flowering, should be headed in, in order to make fine stocky plants. Cuttings may yet be put in.

Carnations, phloxes, &c., in frames, should be aired in fine weather, and all decayed leaves picked off the plants.

Hyacinth and tulip beds will need attention the last of the month, if the weather should be warm.

Ranunculuses should be planted now in frames, and they will give a fine bloom.

Verbenas may be shifted again, if large plants are wanted. Seeds, for producing new kinds, may now be planted.

Seeds of showy annuals, for transplanting into the open border, should now be sown in a frame, or in the greenhouse.

Lechenaultia formosa. If fine large specimens are desired, it will be well now to shift the plants carefully in a good prepared compost.

Hardy roses, prairies, and other climbers, may be pruned this month, and properly trained up to a trellis or wall.

THE MAGAZINE OF HORTICULTURE.

APRIL, 1849.

ORIGINAL COMMUNICATIONS.

ART. I. *Select List of Hardy, Deciduous, and Evergreen Shrubs.* By the EDITOR.

Nothing adds so much to the beauty and interest of a small garden or a suburban residence, as a liberal stock of the showier ornamental shrubs, both evergreen and deciduous. Numerous as the species and varieties are, and natives too, as many of them be, yet it is rare that more than a dozen of them are found in a collection, unless in that of some zealous amateur or lover of trees, who is acquainted with their merits, and fully appreciates their beauty.

More especially are our gardens deficient in evergreen shrubs. Rich as our Flora is in its several species, and prized as they are by cultivators abroad, it is rare to find them occupying a place in our collections. Our pastures abound with the elegant kalmia—our woods are skirted with the beautiful rhododendron—our swamps dotted with the silvery andromeda—and our low grounds clustered with the glossy-leaved winter-green. But among our cultivated shrubs, they are as little known as the rarest plants of foreign climes.

Our object is now to name some of the most ornamental and desirable shrubs; not a list of all, as that would occupy more room than we now have to spare; but, at another opportunity, we shall extend the number, and arrange them all, including those now enumerated, according to the Natural method, that those who are desirous of making an arboretum can have a guide in the selection of kinds adapted for that purpose.

We shall divide our selection into two classes, viz., *Deciduous* and *Evergreen* shrubs, and arrange the kinds according to their average height of growth, so that the young amateur may have some guide as to the proper place of planting in a border, that the dwarfer kinds may not be overgrown by the taller varieties.

I. DECIDUOUS SHRUBS.

SEC. I. *Shrubs growing from two to four feet high.*

1. COMMON MEZEREM, (*Daphne Mezereum*.) A showy little shrub, of quite dwarf habit, and one of the earliest flowering ones our gardens possess: the blossoms, which are of a bright pink, quite clothe the branches, appearing in April before the leaves. On account of the earliness of its blooming alone it should be in every small collection. It grows in any good soil.

2. JAPAN QUINCE, (*Cydonia japonica*.) Among the most brilliant of early blooming shrubs. The flowers are of a deep glowing red, and appear in profusion along the shoots. They open immediately on the appearance of good weather in April, and continue in bloom a long time. The plants have a dwarf and straggling habit.

There are two varieties of the Japan quince, viz., the *white*, so called, but whose flowers are only a pale blush; and the *double-flowered*, whose flowers, however, consist of only two rows of petals of the same deep color as the original species; all are desirable in a large collection.

3. TREE PÆONY, (*Pæonia Moutan*.) It is but a few years since the pæony has been cultivated as a hardy shrub. It is, however, one of the most splendid we now possess, with flowers measuring eight or ten inches in diameter and perfectly double; a small bush with twenty or thirty of these huge flowers presenting a magnificent object. It is of slow growth, and requires a deep and rich soil. In very cold and moist localities, it is best to slightly protect the young plants with a covering of manure, straw, or pine boughs. *P. M. Banksiæ* and *papaveræcea* are the common kinds. Blossoms in June.

Within a few years, a great number of elegant varieties have been produced by the French and Belgian florists, as well as by our own cultivators. These are yet rare, and only

to be obtained at high prices. The best are the *Grand Duc de Bade*, *Hissiana*, *rosea superba*, *alba plenissima*, &c.

4. ROUGH-LEAVED DEUTZIA, (*Deutzia scabra*.) A highly ornamental shrub of erect growth, each branch terminated with a raceme of white flowers, somewhat in appearance like the orange blossom, and delicately fragrant. If allowed plenty of room, and not crowded upon by other shrubs, it forms a fine object. It thrives in any good soil, and blossoms in May and June.

5. FRAGRANT CLETHRA, (*Cléthra alnifolia*.) Though one of the most common shrubs in low grounds in Massachusetts, it is not often seen under cultivation. Its numerous spikes of white flowers are not only beautiful, but they exhale a delightful perfume, and appear late in the season, when most of our garden shrubs have blossomed. It is of the easiest cultivation. August.

6. PERSIAN LILAC, (*Syringa persica*.) One of our oldest and prettiest shrubs, though often made to give way for the common lilac. Its slender habit, neat foliage, and large clusters of flowers claim for it a place in every collection. There is a *white* variety of the same habit, and both possess equal merit. May.

7. THE NEW RED LILAC, (*Syringa* var. *Saugeana*.) This is an improvement upon the Persian; the habit is a little stronger, the foliage small and entire, and the clusters of flowers very large and more than a foot long. It is a great acquisition. Flowers in May.

8. PURPLE-LEAVED BERBERRY, (*Bérberis purpurea*.) A very ornamental species of something of the habit of the common berberry, but with a foliage of the color of the copper beech, contrasting prettily with other shrubs growing near it. It also bears very showy clusters of bright yellow flowers. It is perfectly hardy. June.

9. SWEET-SCENTED SHRUB, (*Calycanthus floridus*.) Universally admired, for the rich strawberry-like odor of its curious brown-colored flowers. It thrives well in any good soil, and should not be omitted in the smallest collection. Blooms in May and June.

10. AZALEA, (*Azalea nudiflora*.) One of the prettiest of early blooming shrubs, the bushes being covered with a pro-

fusion of bright pink blossoms. It is easily cultivated, and thrives in any good loamy soil. More than 50 varieties have been raised by the English and Continental cultivators, many of which are exceedingly beautiful. Flowers in May and June.

11. THREE-LOBED SPIRÆA, (*Spiræa trilobata*.) A beautiful low shrub, with spreading branches, producing an abundance of pure white flowers, which appear in dense corymbs, all over the plant. The habit is neat, and the foliage has a glaucous appearance, which adds to the interest of this species. It is perfectly hardy, and blooms in May and June.

12. DOUBLE DWARF ALMOND, (*Amygdalus pumila*.) The double dwarf flowering almond is one of the oldest, as well as most popular, of garden shrubs, and is indispensable to even the smallest collection. The abundance of its little double blossoms, which are displayed upon the smallest plant, render it the gayest of the early flowering shrubs. It blooms in May.

13. SNOWBERRY, (*Symphoricarpos racemosa*.) Another popular and admired shrub, whose slender branches are loaded with clusters of berries, of the snowiest white, throughout the autumn. It is a native shrub, and grows abundantly on the banks of the Missouri, and in other localities in the West. It has small inconspicuous red flowers, which are succeeded by its showy berries, from August to November.

14. VARIEGATED-LEAVED SNOWBERRY, (*Symphoricarpos vulgaris variegatus*.) One of the few hardy shrubs we possess, with *variegated* foliage. It forms a compact bush, and has a neat foliage, finely variegated with green and yellow. No select collection should be without one or more plants.

15. CRIMSON-FLOWERED, CURRANT, (*Ribes sanguineum*.) A very beautiful low bush, but not sufficiently hardy to be recommended, where shrubs are to be left to take care of themselves. With a little protection of straw, it stands our winters, and its branches are profusely covered with short racemes of deep crimson blossoms, during May. A light warm soil suits it best.

SEC. II. *Shrubs growing from six to eight feet high.*

16. VIRGINIA FRINGE TREE, (*Chionanthus virginicus*.) One of the most beautiful of shrubs, having an upright and sym-

metrical form,—an ample deep-green foliage,—and displaying an abundance of depending racemes of pure white flowers, so finely cut, as to be justly denominated the fringe tree. It is a native of the middle States, and is perfectly hardy. It thrives best in a rich deep loam. Flowers in June.

17. OAK-LEAVED HYDRANGEA, (*Hydrangea quercifolia*.) Another of our native shrubs, of the most ornamental appearance. Its oak-like foliage, and large clusters of white flowers, contrast finely with other shrubs. It remains in bloom from June to September.

18. UPRIGHT HONEYSUCKLES, (*Lonicera tartaricum* and *xylosteum*.) Beautiful shrubs, and among the very earliest bloomers. The Tartarian has pink flowers, which are succeeded by bright scarlet berries; and the Fly (*L. xylosteum*) has pale straw-colored blossoms. May is their season of bloom.

19. ROSE ACACIA, (*Robinia hispida*.) Another of the old denizens of our gardens, but not inferior, in beauty, to many of the more recent acquisitions. Its habit is rather straggling, but it produces a profusion of lively pink flowers which are highly ornamental. May and June.

20. SYRINGAS, (*Philadelphus* sp.) The common Syringa, (*P. coronarius*), is universally esteemed, for the powerful odor of its pretty white blossoms. The large-flowered, or Carolina, (*P. grandiflorus*), is more rare, and the blossoms twice as large as the former. It succeeds the common in blooming, and, though not so sweet-scented as that, its very large blossoms render it equally desirable. There is also a *double* variety of the common syringa, which is well worthy a place in every collection. They flower during May and June.

21. ALTHÆAS, (*Hibiscus syriacus*.) Highly ornamental shrubs, and very desirable, on account of the late period of their blooming. In August and September, their large showy flowers are the most attractive of the garden. There is a great variety of colors, as well as double and single flowers. The best, among the double ones, are the variegated and crimson. They stand the winter best, if planted on a dry subsoil.

22. JAPAN GLOBE FLOWER, (*Kerria japonica*.) Nothing adds more to the gayness of a clump of shrubs, than the golden blossoms of the Japan Globe flower, displayed, as they gener-

ally are, at intervals, from April to September. Its smooth green stems also contrast prettily with the grayish bark of other shrubs. The situation should be warm, and the sub-soil dry.

23. MISSOURI CURRANT, (*Ribes flavum*.) Not so conspicuous as some other shrubs, but deservedly popular on account of its highly fragrant yellow blossoms, which appear in great profusion. It is of the easiest cultivation, growing freely in any soil or situation. May.

24. WHITE-FRUITED DOGWOOD, (*Cornus alba*.) A native species of much interest. It has white flowers, and white fruit, but its greatest attractiveness is the brilliant color of its young shoots, which are of a deep blood red, and form one of the most prominent objects in the shrubbery, in winter and spring. It blooms in May and June.

25. STRAWBERRY TREE, OR BURNING BUSH, (*Eubymus europæus*.) An upright and rather symmetrically formed shrub, with small greenish white flowers, of no beauty, but which are succeeded by brilliant orange-colored berries, suspended in the greatest profusion from every branch. May is its period of flowering, and the berries ripen in September, and hang till April. There is a *white*-fruited variety, which makes a pleasing contrast with the red.

26. DOUBLE-FLOWERED SLOE, (*Prunus spinosa pleno*.) A compact growing shrub, of recent introduction, and not often seen in collections. The flowers are about half the size of the dwarf almond, quite double, pure white, and entirely cover the numerous branches. A fine large specimen in our garden, budded on the plum, and trained as a standard, is an exceedingly beautiful object when in full bloom. It is impatient of a damp situation. Flowers in May and June.

27. SWAMP MAGNOLIA, (*Magnolia glauca*.) If a beautiful glossy foliage, united with large flowers, of the most exquisite odor, are characteristics of a fine garden shrub, the *Magnolia glauca* possesses them all in an eminent degree. Though a native of Massachusetts, it is but rarely seen among garden shrubs; a light loamy soil, with a small quantity of peat or leaf-mould intermixed, suits it admirably. It flowers in July.

28. PRIVET, (*Ligustrum vulgare*.) Common, but not the less valuable as a garden shrub. It has a good habit, a neat

linear foliage, and, when every branch is terminated with a raceme of its white flowers, it forms an attractive object. Grows in any soil or situation, and flowers in July.

SEC. III. *Shrubs from eight to twelve feet high.*

29. SNOWDROP OR SILVER BELL, (*Halèsia tetraëptera*.) A very showy large shrub, of upright habit, having a profusion of silvery bells, depending from every branch, which are displayed throughout May. It should not be omitted in the smallest collection.

30. VENETIAN FRINGE OR SMOKE TREE, (*Rhús Cótinus*.) A much admired shrub, remarkable for the peculiar fringe-like appearance of the seed, which completely cover the shoots, from July to October. The French call it the Periwig tree, an appropriate name. It is of easy cultivation, and thrives in any good soil.

31. COMMON DOGWOOD, (*Córnus flórida*.) A native of our woods, where its large showy white flowers have a conspicuous appearance among the sombre foliage of the surrounding shrubs. It is well worthy a place in every shrubbery, displaying its blossoms during May and June, and the leaves dying off in the autumn of a rich purple tint.

32. CORNELIAN CHERRY TREE, (*Córnus más*.) Highly ornamental, both in flower and fruit. Its blossoms, which are yellow, appear in April, and they are succeeded by an abundance of corol-colored fruit, which render the tree attractive till autumn. In some of the old gardens of Europe, it was formerly cultivated as a fruit tree.

33. JUDAS TREE, (*Cércis canadénsis*.) A handsome shrub, not often seen in cultivation, but one that well merits to be generally introduced. It forms a low spreading tree, and, in early spring, it is a conspicuous object from the great quantity of bright pink blossoms, which appear before the leaves, and cover, not only the young shoots, but the old ones, and even the main stem. May.

34. THE CRANBERRY TREE, (*Vibúrnum oxycóccus*.) Exceeding ornamental during the autumn, when every shoot is pendent with a large corymb of brilliant red berries. The flowers are white, and appear in July. It grows in any situation, even under the shade of trees.

35. THE GUELDER ROSE OR SNOWBALL TREE, (*Viburnum Opulus* var.) Too common and well known to need more than a passing notice, as no shrubbery should be without one or more plants. It thrives in any good soil, and its globular heads of snowy flowers are always admired. May and June.

36. DOUBLE-FLOWERING CHERRIES, (*Cerasus sylvestris* fl. pl.) There are three kinds of the double flowering cherry, two only of which have yet flowered in our collection. The first is the common double cherry, (*sylvestris* fl. pl.) with very compact flowers, like a ranunculus. The other, the double French, (*vulgaris* fl. pl.) with larger and more loosely formed flowers, and expanding a fortnight before the former,—thus keeping up a succession of bloom, during nearly the whole of May and June.

37. WEEPING CHERRY, (*Cerasus semperflorans*.) A handsome weeping tree, grafted standard high, with small linear foliage, and slender branches, producing flowers and fruit a greater part of the summer. As single objects on lawns, a few of these trees have a beautiful effect.

38. THE CHINESE CHAB, (*Pyrus spectabilis*.) One of the showiest of double flowering trees, the branches being literally covered with pink flowers, as large as a small rose. Unless properly pruned, it only blooms every other year. May.

39. HAWTHORNS, (*Crataegus*.) There are a great number of fine species and varieties, which comprise the extensive family of hawthorns, that are well worthy a place, wherever there is room; a few of them are particularly beautiful, and should, on no account, be omitted in the smallest collection. There are the double white, (*C. Oxyacantha multipler*), the new double pink, (*C. O. rosea pleno*), and the old single scarlet, (*C. O. punicea*.) The last, though single, a most brilliant shrub; the double pink has flowers as perfect as the ranunculus; all of them bloom profusely, but, to have handsome specimens, they should be annually pruned, and be allowed plenty of room, or otherwise their real beauty is greatly marred. We have thirty sorts in our collection. May and June.

40. THE LABURNUM, (*Cytisus Laburnum*.) A very pretty shrub, on account of its numerous large pendant clusters of golden yellow blossoms. The *Scotch* is the hardiest and finest

kind. There is a *weeping* variety, which forms a most graceful and ornamental tree, when grafted standard high. They are partial to a dry subsoil. Flowers in May.

There are many other shrubs which ought to be included in this list; such as the Amelanchiers, Parias, Spiræas, Pyruses, Lilacs, &c., &c., but we have already extended our limits, and must defer them to another opportunity.

II. EVERGREEN SHRUBS.

Growing from two to six feet high.

41. RHODODENDRONS, (*Rhododéndron* sp. and var.) We have, from time to time, said so much in favor of the general introduction of this splendid evergreen shrub, into our gardens, that we shall not extend our remarks here.

The *catawbiense* and *maximum*, our two *native* species, demand a place in every shrubbery: but preëminently beautiful are the English hybrids, produced from the seeds of these, and the foreign kinds. They are perfectly hardy, thrive freely in a well prepared soil of loam and leaf mould, and display their heads of brilliant flowers, during the month of June. When they become more plentiful in the nurseries, we hope to see them planted in every garden.

42. LAUREL, (*Kalmia latifolia*.) This most elegant of all evergreen shrubs, though so common throughout the State, is rarely seen under cultivation. In Medfield, and at Cohasset, and near Newburyport, and Lowell, it grows abundantly. Mr. Emerson, in his Report on the *Trees and Shrubs of Massachusetts*, says, that in "a rocky pasture of several acres, near a pond, in Westboro', it forms large close clumps, or islets, intersected by plats and alleys of grass. In June and July, when every one of these innumerable green islets, is covered with white or rose-colored flowers, and the cattle are feeding on the grass, or lying under the few oaks which are scattered through the pasture,—the whole, with the lake and its fringe of trees, is worth going out of one's way to see."

It is impatient of removal from its native habitat, and the only way to possess it, is to raise it from seeds. In this way, the bushes are dwarf and stocky, and will bear removal, even when of large size, as safely as a currant-bush. The soil should be composed of loam and leaf mould, or peat earth.

43. HOLLY-LEAVED BERRBERRY, (*Mahonia aquifolium*.) A handsome shrub, from the Rocky Mountains, but quite hardy in latitude 42° north. It is a very compact dwarf growing shrub, with leaves similar to the holly, and with a profusion of clusters of handsome yellow flowers, which appear at the ends of the branches. In winter, the foliage becomes rather brown, but, in summer, it again assumes its deep green glossy tinge, and is a most valuable acquisition to this class of plants. It thrives under the shade of other trees, and any light soil will suit it. April and May.

44. THE WINTER BERRY, (*Prinos glaber*.) A very pretty evergreen shrub, growing in sheltered places in Plymouth and Hingham, with narrow leaves, of a deep glossy green. Flowers white, inconspicuous, and succeeded with small black berries. Its greatest merit is the beauty of its foliage, which is at all times green and glossy. The same soil as that for the Kalmia, suits the winter berry. July and August.

45. TREE BOX, (*Buxus sempervirens* var.) The Tree Box forms a very handsome pyramidal tree, attaining, after many years, the height of ten or twelve feet, but we have seen fine specimens twenty years old, which were not six feet high. There are several varieties, but the two best known in our gardens, are the *broad-leaved*, and *narrow-leaved*; both are hardy, grow freely, are highly ornamental, and should be found in every garden.

With this rather long list, extended, because we could not well leave out any of them, the amateur can make a selection suitable for a small or large garden. And if it shall aid in making the several kinds better known, and more generally introduced into collections, our object in writing it will have been accomplished.

ART. II. *Fungi in Vegetation.* By JOHN LEWIS RUSSELL, Professor of Botany, &c. to the Massachusetts Horticultural Society.

BEING very much interested in an article which appeared in your February number on "Destruction of Filberts by Fun-

gi," as suggestive of many important investigations, I applied to the writer for specimens of what he considered *Cryptomyces Wauchii*. With great readiness Mr. Goodsell kindly forwarded to me several specimens, of which he says:—

"Since the receipt of yours, I have examined, perhaps, fifty filbert plants that were injured last season, as I supposed, by the fungi, without being able to find a single specimen exhibiting its summer appearance—the side where the fungi made their appearance is uniformly dead—the outer bark separated from the inner, which is covered uniformly as on the specimens enclosed."

By submitting these to a powerful magnifying lens, I could perceive no structure of the fungi, which would ally them to any known form with which I am acquainted; and, indeed, there was nothing which would indicate that these specimens were any thing more than the dead remains of some sort of parasitic growth. To the genus *Cryptomyces* belong fungi which burrow between the wood and bark of whatever plant it infests; and the general description in the article referred to *seems* to point out the plant as Mr. G. intimates. I shall therefore feel greatly obliged to him for perfect specimens next summer, as he promises me.

It may not be familiar to the reader, that some of these lower forms of vegetables, *e g.* the parasitic fungi, have a very beautiful internal organization, consisting of a sort of seed vessels called technically *asci*, and other peculiarities beside. Deeper powers of the microscope are requisite to develop them than are commonly at hand. As objects, therefore, of curiosity and elaborate beauty, or as subjects for the care and prudent inspection of the agriculturist, these injurious forms of vegetable life address him and call upon his attention, as the article very properly suggests. I hope that they will be accordingly studied, and made worthy of investigation, as your Rochester correspondent has set so good an example, by moving in so important a matter.

Hingham, March, 1849.

The subject of fungi in vegetation is one of much interest, and, we trust, will receive the attention of all cultivators. We shall be glad to have Mr. Russell and Mr. Goodsell pursue the matter further.—*Ed.*

ART. III. *Notices of Culinary Vegetables, new or recently introduced, worthy of General Cultivation.* By the EDITOR.

NOTWITHSTANDING four years have elapsed, since our last notice of new vegetables, under this head, only a limited number of new and desirable kinds, have been introduced, during that period. Some of these have been incidentally noticed, from time to time, but we now embrace the opportunity, to bring them together, and give a more detailed account of their merits. We begin with

PEAS. Every year adds to the catalogue of varieties offered for sale, by seedsmen, but most of them vary so slightly from each other, that they soon go out of cultivation, or attract but little attention. A few only possess merit sufficient to recommend them for general use. Among those of the latter description, are the following :—

Champion of England. This is one of the most remarkable varieties that has recently been produced. It is one of the marrow peas, blue, and exceedingly shrivelled, and, in richness of flavor, surpasses all other peas that we have ever eaten. It is not only one of the tenderest fleshed sorts, but it is more sugary than any other variety. It grows about two feet high, produces well, and it must be ranked at the head of all the peas of its class, yet raised.

Flack's Victory we have already noticed, and we now allude to it, to remark, that the experience of three years has fully confirmed all we said of it. It is a large delicious variety, and must form one of a succession of peas in every garden.

Fairbeard's Early Surprise. This is another variety, produced by the same cultivator, who raised the Champion of England, and although it is now introduced into our collections, for the first time, it will, undoubtedly, prove a fine pea. It is as early as the Early Frame, and has the flavor of Knight's Marrow. We shall speak of it, after a fair trial.

Other new ones are *Burbidge's Eclipse*, a large blue marrow, 15 inches high ; *Early Danecroft*, the *Early Emperor*, &c.

HOO-SUNG, OR OO-SUNG. This is the name of a new Chinese vegetable, brought home by Mr. Fortune, in his Chinese expe-

dition, and of which, the following account is given in the *Journal of the London Horticultural Society*, (Vol. I. p. 228.)

A lettuce-like plant, from Shanghae; stems cylindrical, 2 to 3 feet high, erect, light green, with a green succulent pith, which is the part used; leaves oblong, tapering to the base, the uppermost stem clasping. The flowers are small yellow, in panicles slightly drooping. The plant is tolerably hardy, and may be cultivated in the manner of lettuce. Mr. Fortune recommends it to be planted "in rows thinly, say 1½ foot between each plant. It is fit for use, when the stem has grown to its full size, which is early in the spring, at Shanghae." He also states that it is a vegetable much esteemed by the Chinese, and gives the following account of their mode of dressing the Hoo-sung:—

Pare off the outer skin, cut off the leaves, and take the stalk; either simply boil it with salt and pepper; or stew it with a few spoonfuls of soup, or with a little soy, salt, and pepper. The last is the preferable way of dressing it.

Our correspondent, Dr. Wendell, of Albany, raised and exhibited specimens of the Hoo-Sung, and gave away seeds to several cultivators. We are not aware that they can be obtained at the seed stores, but, as those who possess seeds, may be desirous of knowing the best way of raising and using it, we copy the above account. We shall be glad to hear some further account of it from Dr. Wendell, or any of our correspondents who possess the seeds.

RHUBARB. Myatt's Victoria has been so generally introduced, and has given such satisfaction to all who possess it, that it will be difficult to displace it by other new kinds. Mr. Myatt, the raiser of this fine kind, has offered for sale, a new variety, and some others have also been produced. Capt. Lovett, of Beverly, has raised some very superior seedlings, fully equal, if not superior, to the Victoria. The two following appear to be the leading kinds, offered for sale, by the London growers:—

Myatt's Linnaeus. This is the principal kind, grown by Messrs. Myatt, who raise immense quantities for the London market, for several years, and was not offered for sale, until after numerous applications from the London trade. It is remarkably early, and unusually productive, and is pre-

ferred by purchasers, to every other variety, for its delicious flavor. The stalks being large, and free from filaments, it is admirably adapted for preserving, and all other purposes. For early forcing, it is the best known. The superior flavor, large size, unusual productiveness, and extremely light red appearance, render it alike desirable and profitable.

Mitchell's Royal Albert is said to retain its supremacy over all other sorts, hitherto produced, being from two to three weeks earlier than any kind now grown. It is most delicious in flavor, a splendid red color, most prolific bearer, and free grower, with large fleshy stalks, and, for early forcing, is more suitable than any other varieties. It has been acknowledged by all the principal growers attending the London markets, to be by far the best ever introduced. This is the account of it given by Mr. Mitchell. We have a root or two of it now, imported last year, and shall have an opportunity, the coming season, to test its qualities, in comparison with others.

LETTUCES. Many new varieties have been introduced, among others, the *Artichoke-leaved*, *Spotted or Tiger*, *Malta*, &c. The following we can highly recommend from our own experience :—

Palestine. This is a superior variety of lettuce, of something of the habit of the Imperial; but the head is rather more solid. It is remarkably tender, and a superior variety. The seeds were sent to the Massachusetts Horticultural Society, three or four years ago, and it proves to be an entirely new lettuce.

Turkey. Another new kind, the seeds of which were received from the same source as the Palestine, and were distributed among the members of the Massachusetts Horticultural Society. It is a very dark-leaved lettuce, forming a good-sized solid head, but tender, and of fine quality.

Nonpareil Cos. The Cos lettuces are but little cultivated in the vicinity of Boston, and generally their excellence is not properly appreciated; some of the kinds, it is true, are inferior, and run up to seed so quick, that a good head can rarely be obtained in our climate. The Nonpareil is not only a large and fine-flavored variety, but it heads freely with ordinary management, and is decidedly the best of all the Cos lettuces we have ever raised.

CELERY. Seymour's Superb White has obtained so good a reputation, that but few cultivators can be induced to try other sorts. The following variety, we can however recommend, as fully equalling that fine sort :—

New Curled. A remarkably solid stemmed variety, growing to good size, and one of the tenderest of all the celeries. No good collection should be without it.

CABBAGES. The new varieties are numerous, but only a few have been introduced; four years ago, we merely noticed some as new, which had not then been grown in American collections; having since had the opportunity to try some of them, we would notice—

Waite's New Dwarf, as one of the finest early cabbages. A cultivator who has raised for the market, for twenty years, states that it was the best variety he grew last year. The heads are small, but they are solid, and uniform in shape. It has no coarseness about it, and the flavor is superior. It also occupies but little room, compared with some of the old varieties; and a large number of plants may be grown upon a small piece of ground.

The Early Nonpareil is a fine cabbage, somewhat like the Early York, heading freely, and a fine-flavored and excellent variety.

ART. IV. *Descriptions and Engravings of Select Varieties of Apples.* By the EDITOR.

XXVIII. MINISTER. Kenrick's American Orchardist.

THE late Mr. Manning considered the Minister, (*fig. 14.*) as "one of the very finest apples New England has produced;" and, after a long acquaintance with it, we can fully confirm his opinion of it. In the tenderness of its flesh, and its brisk vinous juice, it is not surpassed by any apple of its season. It is of good size, and, though of somewhat irregular form, it has a fair yellowish skin, very distinctly striped with bright crimson. The tree is a vigorous and healthy grower and a most abundant bearer.

This fine variety originated in Rowley, Mass., and was brought to notice by the late Rev. Dr. Spring, of Newburyport, who purchased the first fruit that was brought to market; and it was, in consequence, called the Minister apple. Mr. Manning immediately procured it for his extensive collection; and, through him, it was introduced to general cultivation. It merits a place in every collection of fruits.

Size, large, about two and a half inches broad, and two and three quarters deep: *Form*, oblong, similar to the Bellflower, ribbed at the base, which is a little flattened, and tapering to the crown, which is small, and also somewhat rib-

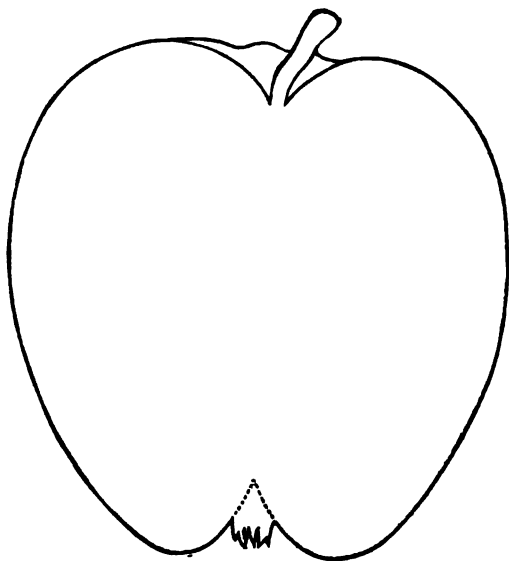


Fig. 14. Minister Apple.

bed: *Skin*, fair, smooth, pale greenish yellow, very distinctly and irregularly striped with bright red: *Stem*, rather short, about half an inch in length, slender, and inserted in a small, irregular, and rather shallow cavity: *Eye*, small, closed, and little sunk in a small, furrowed basin; segments of the calyx short, twisted: *Flesh*, yellowish white, fine, crisp, and very tender: *Juice*, plentiful, rich, subacid, brisk, and high-flavored: *Core*, rather large, partially open: *Seeds*, small, obovate, plump. Ripe from December to February.

XXIX. HOLMES. Thatcher's *American Orchardist*.

Upwards of twenty-five years ago, Dr. Thatcher, in his excellent Treatise on Orcharding, stated that the Holmes apple, (*fig. 15,*) "was much admired and extensively cultivated" in the vicinity of Plymouth; and, to this day, notwithstanding the introduction of so many new and splendid varieties, it still retains this character throughout the Old Colony. It is one of the most popular and salable apples brought to the Plymouth market, and a barrel or two of them seem indispensable to the completion of the winter store of every family. Dr. Thatcher is the only author who mentions it, and,

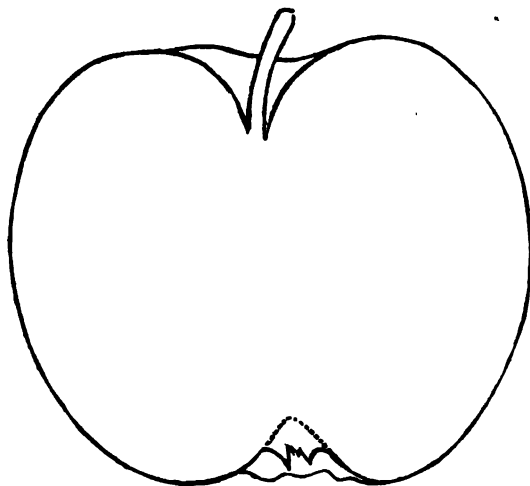


Fig 15. Holmes Apple.

on diligent inquiry, we cannot learn that it is cultivated but little, if at all, out of Plymouth county.

Dr. Thatcher states that the variety sprung from a small sprout planted by Z. Holmes, Esq., of Kingston, Mass., without any knowledge of its quality, and that, "in the eleventh year, he gathered from it thirty bushels of apples." Another account of its origin, given to us by Mr. Washburn, of Plymouth is, that Mr. Holmes cut a shoot for a whip stick when out with his team, and that, when he reached home, he planted it in the ground, and it subsequently grew, and produced the quantity of fruit already mentioned. Whether this, or

Dr. Thatcher's statement, is the more correct, we are not able to state; it is, however, immaterial, as it is certain the variety was first known in the orchard of Mr. Holmes, whose name Dr. Thatcher has properly given to the fruit.

We have noticed the Holmes apple once or twice in our previous volumes, and more particularly in our notes on some of the gardens in the Old Colony, (Vol. XII. p. 470,) when we had seen several trees in full bearing; our Plymouth friends have also often sent us specimens of the fruit, but not so fine as the present season; and this has given us the opportunity to present a correct outline of the fruit. The tree produces the most abundant crops, bears young, and every year; but more plentifully every second year. In consequence of its productiveness, the fruit is often rather small; but, when well grown, it is full medium size, and very fair and handsome. The flesh is remarkably tender and melting; but, notwithstanding this, it is a good winter fruit, keeping sound till March.

Size, medium, about two and three quarters inches broad, and two and a half deep: *Form*, roundish, slightly flattened at the base, and narrowing little to the crown: *Skin*, fair, smooth, pale yellow, tinged with bright blush on the sunny side, and covered with rather large russet specks: *Stem*, short, about half an inch long, rather slender, and moderately sunk in a round, smooth, and rather shallow cavity: *Eye*, rather large, partially open, and moderately depressed in a medium-sized, ribbed, and open basin; segments of the calyx partially reflexed: *Flesh*, yellowish, fine, crisp, and remarkably tender: *Juice*, abundant, with an agreeable admixture of sweet and acid, sprightly and high-flavored: *Core*, medium size, close: *Seeds*, medium size, rather dark. Ripe from December to February.

XXX. TOLMAN'S SWEETING. Thatcher's *American Orchardist*.

Dr. Thatcher is the first author who mentions this old and "justly admired apple." He was not able to trace out its origin. In Dartmouth, in the county of Bristol, it was then best known, and held in much estimation for family use. It is now very extensively cultivated, and is one of the most common sweet apples to be found in our markets. The fruit

is uniformly fair and handsome, and the tree a great bearer. The trees are moderately vigorous, and form a broad spreading head.

Size, medium, about three inches broad, and two and a half deep: *Form*, roundish, regular, narrowing very little to the eye: *Skin*, fair, smooth, of a pale yellow, or greenish yellow, tinted with pale blush on the sunny side, and consider-

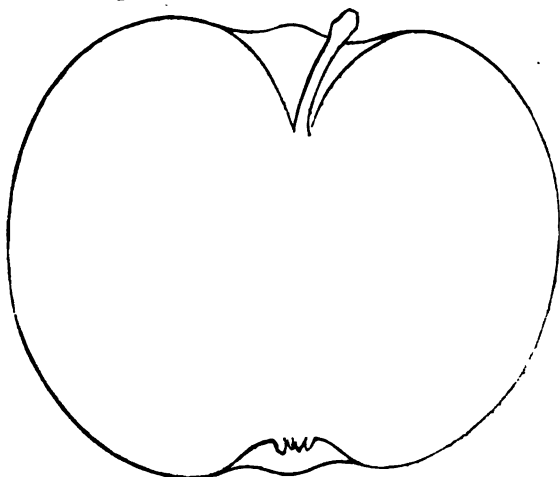


Fig. 16. Tolman's Sweeting Apple.

ably dotted with large reddish spots: *Stem*, medium length, about half an inch long, rather slender, curved, and inserted in a deep, open, and irregular cavity: *Eye*, medium size, closed, and sunk in a small, rather deep and somewhat ribbed basin; segments of the calyx broad: *Flesh*, yellowish, rather fine, and tender: *Juice*, tolerably plentiful, rich, sugary, and well-flavored: *Core*, small, close: *Seed*, small, rather short, and plump. Ripe from November to February.

ART. V. *A Select List of Apples, with a Few Observations on their Respective Merits.* By SAMUEL WALKER, President of the Massachusetts Horticultural Society.

DEAR SIR,—For the first time, I have ventured to place on paper, a select list of apples, such as are, in my opinion, the

best suited for the meridian of the New England States. I have done this with two motives. First, to impart the little, but all the information I have, on this subject, and secondly, with the hope that others, better informed than myself, may correct the list I thus submit, add others thereto, and impart further information through the pages of your Magazine.

I have placed the varieties in the order in which I rank them for cultivation, provided I had but one, two, three, or more trees, that is, if I were confined to the cultivating of only *one* apple tree, I should plant No 1, the Rhode Island Greening; if two, then Nos. 1 and 2, and so on.

LIST OF TWENTY-SIX VARIETIES OF APPLES.

- | | |
|--------------------------------------|--|
| 1. R. I. Greening. | 15. Fameuse. |
| 2. Gravenstein. | 16. Summer Pearmain. |
| 3. Baldwin. | 17. White Seek-no-Further. |
| 4. Early Harvest, or the Strawberry. | 18. Benoni. |
| 5. Nonsuch. | 19. Red Astrachan. |
| 6. Porter. | 20. Fall Harvey. |
| 7. Minister. | 21. Williams's Favorite. |
| 8. Tolman's Sweeting. | 22. Ladies' Sweeting. |
| 9. Large Yellow Bough. | 23. Jonathan. |
| 10. Roxbury Russet. | 24. Peck's Pleasant. |
| 11. Danvers Winter Sweet. | 25. Ribstone Pippin, for New Hampshire and Maine. |
| 12. Pomme Royal. | 26. Esopus Spitzenberg, for Western Massachusetts. |
| 13. Hubbardston Nonsuch. | |
| 14. Fall Pippin. | |

There are many others deserving of cultivation, as the Garden Royal, Peck's Pleasant, Northern Spy, Westfield Seek-No-Further, Herefordshire Pearmain, &c. &c.

Feeling, as I do, that the above list is not perfect, and that it may meet with many objections on the part of cultivators, I wish to state, that I have placed the *R. I. Greening* at the head of my list, from the fact that a good crop is generally produced every season; the tree is a free grower; fruit, fair, large, and handsome. A *good table apple*, but not first-rate. For the kitchen, it has *no superior*, if an equal. These *combined good qualities* have induced me to place it as No. 1.

Gravenstein.—I have placed this variety next in order, because it is a summer and early autumn apple, and will

furnish the grower with good fruit for the table and kitchen, in connection with the R. I. Greening, from August to February, inclusive; thus combining more useful properties, than if the Baldwin, next in order, had been placed with No. 1.

Baldwin.—Notwithstanding I have placed this variety as No. 3, yet I am ready to admit that it is, as a *table* fruit, superior to any other variety grown in Massachusetts. It generally bears large crops every alternate year, and may be said to be the best fruit for the *table*, from November to April.

Early Harvest.—This variety bears early, and produces large crops. On highly cultivated soils, it is exceedingly rich and fair, but in low, or sterile lands, it is often small in size, and very much disfigured, and often injured by spots of mildew; should the weather prove wet when it is nearly ripe, the fruit cracks and becomes insipid. But its sprightly flavor, and the early period of its maturity, (July,) give it a high rank in the list of apples. The Early Strawberry apple will prove a good substitute.

Nonsuch.—This is an apple of great merit, but it requires good cultivation, and is apt to overbear. If one half of the crop was early taken from the tree, and a top-dressing of bone dust and wood ashes given to it every other year, with occasionally a small quantity of air-slacked lime, this variety would, I think, vie with the best table fruit, from November to February.

Porter.—A variety so well known, that description is unnecessary—good cultivation will ensure fine specimens.

Minister.—Fine specimens of this variety, if well kept, are very excellent in November, December, and January.

Tolman's Sweeting.—For baking, this variety has no superior; for the *table*, it is scarcely worthy of cultivation.

Large Yellow Bough.—Persons who are fond of *sweet* apples will cultivate this variety in preference to the Early Harvest.

Roxbury Russet.—This variety is one of the best *late* apples.

Williams.—This is one of, if not *the* highest colored apples in cultivation—to produce fine specimens, the tree must be taken care of, the soil well tilled, and manured. The fruit falls from the tree before it is *fully* ripe—salt hay, or some other soft material, should be placed round the tree to prevent the fruit being injured.

White Seek-no-Further.—When the specimens are well grown, and the fruit fully ripe—say, in January, there is no apple superior to this variety. With these remarks, I will close this first chapter on apples.

Roxbury, March 19th, 1849.

We need hardly comment upon the communication of our friend, Mr. Walker, President of the Massachusetts Horticultural Society. For several years, while Chairman of the Fruit Committee of the Society, all, or a greater part, of the apples in the above list have repeatedly passed under his eye, and he is thus enabled to speak of their qualities, in addition to his experience as a cultivator. We trust soon to give a selection of other fruits from his pen, and, in the mean time, we would commend the list to all who, at the season now approaching for planting, are making a selection of apples.—*Ed.*

ART. VI. *On the Management of Peach Trees.* By R. B. LEUCHARS; New Haven, Conn.

HAVING attentively studied the cultivation of the Peach, among the cold, bleak, barren hills of the north of Scotland, as well as in the more temperate districts of the south of England, I herewith send you a few remarks upon that subject, which, I hope may be useful to some of your readers, at least, in those places where—as in this quarter—the peach is little better than a cumberer of the ground, and where, if some regenerative principle be not adopted, it is very likely to become soon a sort of a vegetable nonentity, among the fruit trees around it. With a superior soil, and a far more favorable climate than Britain affords, there are, nevertheless, many places where peaches are more expensive in their culture, and less productive than in that country: depending almost entirely upon the unaided efforts of nature, it would appear cultivators presume too much upon the possession of these physical advantages in the growth of this noble fruit. They seem to lull themselves into a kind of lethargic indifference, which proves fatal alike to their purses and to their peach trees. Many console themselves with the reflection,

that, as their trees flourished well and bore abundantly twenty years ago, they ought to do the same now. They fancy, that the reversion, or suspension of some one or other of the natural laws has changed the whole system of things, and what could they do? At all events, the gross luxuriance—the unproductiveness—the canker, and premature decay of their peach trees, were consequences and calamities, which they could neither control nor avert. So they reflected, and so they believed. Many people justify their inattention to the laws which regulate this material world, by saying, these are things unknown to human ken, and beyond the power of human penetration; that vegetable physiology, and such like subjects, are only fit for the amusement of scientific men, and useless for all practical purposes, connected with manual labor.

No system of reasoning could be more erroneous and absurd. To the farmer and horticulturist—and especially to the latter, no branch of science can be so serviceable, so instructive, and so amusing. Though the operations of planting and pruning are apparently simple, yet a knowledge of the physiology of plants enables the operator to proceed with systematic propriety. The principles and purposes of the sap must be studied, as by its agency the tree is developed. The sap is acquired and influenced in different ways, and by different methods and manipulations of the cultivator. In spring, the small spongelets, or feeding roots, absorb fluids and gases from the soil, which are conveyed by capillary attraction, or perhaps, more properly, by atmospheric pressure, through the various ramifications of the stem and branches; this sap, being thus extended over the different parts of the tree, mingles with the gaseous fluids absorbed by the leaves, and, losing the parts which are useless for nutrition, by evaporation, becomes highly elaborated for the deposition of cambium and the formation of flower-buds. The superfluous unelaborated sap which is not required for these purposes descends to the roots, strengthening the spongioles, whereby they are enabled to extract more nourishment from the soil, throughout the season; and, as these two kinds of saps mingle in the leaves, the descending sap, which has not been deposited in like manner, mingles with that which is ab-

sorbed by the spongioles, is again carried upwards, and is stored in the branches during their period of repose. This stored-up sap is partly not elaborated—partly elaborated, but not assimilated; its purity depends upon the correlative influence existing between the roots and the branches; thus, if the roots have absorbed no more sap than the leaves have been able to convert into cambium, and proper juice, more woody fibre will be formed—and the sap, though less in quantity, will be more refined in quality. The liber and alburnum will be thinner, but of finer and more woody texture; and the tree, altogether in a condition to withstand better the vicissitudes of winter. In trees, where the absorption of the roots have been too much for the assimilative power of the leaves, a large deposition of cambium has been induced, but not finished before the assimilating power of the leaves have been destroyed. The alburnum, liber, and pith, are merely sponges of watery matter. The medullary rays, and whole cellular tissue is filled with crude, unassimilated sap—the frost acting upon these watery elements, it expands them—the sap-vessels are rent asunder, as will frequently be seen, in the bursting of the bark; the organization of the tree is destroyed, and death is the consequence.

Let any persons examine their peach trees, and they will easily discover whether disease be not already in their system. If the disease be considerably advanced, the pith and alburnum will present a brown, discolored appearance, and, in some cases, appear completely disintegrated. On examining a number of trees, a few days ago, I found them in various stages of decay—some, with the alburnum and liber in a state of decay, while the pith and woody fibre appeared quite healthy; others, with the pith, and all the layers of bark decayed; and some, with the alburnum only. When the decay has well-nigh done its work, all the parts will appear discolored. The decay, in all these stages, may be in the tree, and yet be apparently healthy, but its doom is sealed, and the sooner its place is supplied, the better. I do not, for one moment believe, (as I have heard many assert,) that the disease is hereditary, or constitutional, for trees of similar constitutions, though of different genera, if subjected to the same conditions, will be similarly affected. Sometimes one part of

the tree will be affected, and not another, but generally it is first discoverable in the stem, and the young unripened shoots that are attached to it; and, when once the cellular tissue of the stem is destroyed, the tree may be cut down, however healthy may appear the branches, for no quackery in the world will cure it.

The relation existing between solar influence, and the vegetable kingdom, requires, also, our attention in connection with this subject: this, however, is of less importance, in a practical point of view, as it is an agency entirely beyond our control; nevertheless, so extraordinary is the influence exerted by light and heat, over the vegetable creation, that they may, in truth, be termed the prime essentials of its existence. When a plant is deprived of solar light, it exhibits a half-organized, unduly elongated mass of matter, filled with a superabundance of unassimilated juices; if gradually restored to the influence of the sun, it will assume its natural and mature form. Now, in this case, it is evident, that a close relation exists between light and vegetables, and that constituent of which a considerable portion of every vegetable is composed, namely,—carbonic acid, for here the former has modified the effect of the latter upon the plant. The potency of this modifying power is frequently exhibited in a very striking manner, in those latitudes of the globe, which are characterized by great luxuriance of vegetation, and by periodical, or accidental seasons of deep shade, or intense sunshine. I have seen this effect also strikingly exhibited, while forcing vines and peach trees, in the north of Scotland, during the dark, gloomy days of December and January, when the sun would be enveloped in a dense foggy atmosphere for weeks together. I have seen this state of etiolation so great, that, upon the restoration of the sun's rays, the leaves were unable to resume their elaborative functions, and, consequently, drooped under its influence; a certain balance in the atmospheric constituents is essential to the successful development of vegetables, and when that balance is destroyed, a change takes place in the plants subjected to its influence.

Plants will, in some measure, adapt themselves to circumstances, but not without producing certain changes in their nature; but this may happen without producing any material

effect, as far as regards the general health or appearance of the plants. Solar influence, however, does not merely affect the shoots of a growing plant, for the young roots, or spongeoles, are as suddenly, and in a similar degree, affected. The spongelets become less active, and, if it be for a short time withdrawn, they lose their power of action altogether. The destruction of any quantity of the foliage acts on the roots nearly in the same manner as a diminution of the natural quantity of light. The respiratory powers of the plant become impaired, and the healthy action of the rootlets suspended, if not altogether stopped. Respiration takes place, by the power, which the leaves possess, of inhaling and exhaling oxygen, and decomposing carbonic acid: oxygen is essential to the formation of carbonic acid generated in the process of respiration; but, when this carbonic acid is decomposed, and the oxygen liberated, the same oxygen which is set free will serve again for a fresh formation of carbonic acid, so long as there remains any carbonaceous materials in the sap; but the leaves will not accomplish the decomposition of carbon, except when in a green and healthy state; the leaves and young shoots being the principal meridian of decomposition, it is evident that the greater the quantity of these upon the tree, the greater will be the quantity of carbon decomposed. Moreover, we learn, from scientific investigation, that, during light and sunshine, plants assimilate carbon, and evolve oxygen, and that, during night, and shade, this system of assimilation is reversed, that is, they inhale oxygen, and evolve carbon; oxygen is assimilated to the plant; not as it is inhaled, but most probably, by means of the decomposition of carbonic acid when a portion of it is retained. The most obvious influence of oxygen, as applied to the leaves, is that of forming carbonic acid, and thus presenting elements to the plant suitable for assimilation, and consequently facilitating its development. Thus, it appears that oxygen gas, which has been found to be indispensable to animal life, is no less indispensable to vegetable life; and, though plants will not thrive well in an atmosphere of pure oxygen, it is quite evident that a certain quantity is absolutely necessary for their perfect development.

But what, it may be asked, has all this to do with the cul-

ture or decay of peach trees? A good deal, as any one will see, who gives the subject a little reflection. It is a common proverb, that "knowledge is power;" this, however, is only when it is reducible to practice; and that the first steps towards the cure of a disease is to obtain a knowledge of the cause; to effect this, we must sap the foundation of the subject; in short, we must begin at the beginning. What would be thought of a man seeking a physician's diploma, who knew nothing more of the human body than could be seen from the outside? We must study the secret causes of those wonderful results which are daily produced in the vegetable world. Thus, we obtain a key whereby we may unlock the storehouses of nature, and thereby be enabled to form methods and principles of action most suitable to the constitutions and requirements of those vegetable productions, which contribute so largely to the pleasures, the comforts, and the necessities of man. I am not setting myself up as a physiologist, or a teacher of chemistry; I know but little of the one, and am almost profoundly ignorant of the other; but I am a keen lover of nature, and delight in contemplating the various *modus operandi* by which vegetables develop themselves under various circumstances. I frequently take notes of her workings, just by way of seeing what she is up to, and I find these observations very useful in my practical operations. I am not attempting to establish any new theory, or to upset an old one, nor even a new system of practice, but simply to point out a few plain and simple reasons for the propriety and success of a system of practice, which has been adopted with beneficial results, in a country far less favorable for the culture of fruit trees than any part of the temperate latitudes of North America; where the prevalence of late springs, wet soils, and short summers, call forth all the energy and skill of the most experienced cultivator, to produce even a tolerable crop: And if these remarks serve merely as an incentive to the investigation of the cause, and the discovery of a system whereby the premature decay of peach trees may be prevented, my object in writing will then be fully attained.

There can be little doubt but the chief causes of these evils are to be found in the excessive rapidity of its growth,

and the improper formation of young wood in the first years of its existence; were this followed by a reciprocal action between the roots and the branches, whereby a sufficiency of refined juices may be highly elaborated for the deposition of cambium and the production of fruit, proper woody fibre would be formed; the trees would cease to grow luxuriantly, and would remain in a fruit-bearing state. On examining a considerable number of trees last summer, in different parts of the States of New York and New Jersey, growing in a state of barren luxuriance, I found them exactly in conditions to confirm the conclusions which I had come to, by investigations, and experiments performed on peach trees in England, only with this difference, that the frost in the south of England, is seldom so severe as it is in this part of the States, which somewhat modifies the effect of a similar cause; but, in severe winters, the effect, produced upon luxuriant trees, is precisely similar to that exhibited in a considerable number of trees in the garden in which I am now writing. In the States above mentioned, as well as here, the trees were fed chiefly by tap-roots, penetrating four or five feet into the subsoil, and absorbing therefrom an exuberance of unassimilable matter, which has never been acted upon by atmospheric influence, and unfit, when taken in excess, for the organization of fruit-trees; and, although there is a continual absorption and assimilation going on between the roots and leaves, yet it is of that crude, unrefined quality which is only fit for, and finds an egress in, the production of young shoots. Trees, in a young state, have the most luxuriant foliage, and possess, at that time, the most powerful elaborative energies; yet it is well known that they will go on from year to year, growing luxuriantly, flowering abundantly, and exhausting the soil of its nutrient elements, without containing the smallest portion of those highly refined juices which are essential to the production and maturation of fruits. To produce large crops of superior fruit, the finest harmony must be maintained between the roots and the branches, or rather between the spongioles and the leaves. The elaborative powers of the one should be in due proportion to the extractive powers of the other, and, by this condition alone, a state of fruitfulness can be maintained. The fruit is also acted upon and nour-

ished by solar influence, but not until it has reached a certain stage of development ; the materials and means of production must be inherent in the plant, which must bring the fruit forward, until it is able to render the plant assistance by its own powers of assimilation. Peach trees may contain abundance of materials for producing shoots, and perfecting blossoms, but, unless the elements for the production of fruit be also in the tree, the blossom-buds will expand—the blossoms develop themselves, but they will prove abortive.

Assuming, then, the correctness of this theoretical reasoning, which, I think, will be pretty generally admitted, we have some clue to the means of effecting a cure. To this end, the gross feeding vertical roots must be cut away, and small ones induced near the surface. A root medium must be given them, from which nutrient, organizable matter can be absorbed, and acted upon by atmospheric gases. The strong roots should be cut as often as the tree shows signs of over-luxuriance, and, when this is once done, a sufficiency of roots will be produced near the surface to prevent the tree from being injured by repeated operations. The perpendicular roots are the worst, as it is by these that the tree is supplied with a superabundance of watery matter. A good method to prevent these in some degree, is by placing a slab of stone, or, what is better perhaps, a piece of concrete, a few feet in diameter, immediately under the tree. This not only prevents the tap-roots from getting down, but makes the pruning of them afterwards more easily performed. In rich, deep soils, they will require moving and replanting, every one or two years, having all their strong roots cut within a few feet of the stem : the trees will thus be kept in a healthy, fruit-bearing state. Some years ago, I removed some peach trees which had grown for six years in a state of barren luxuriance, worse than any I have seen in this country. I took them up, and moved them to another part of the garden. I cut every root to within two feet of the stem—some of them, within that distance, were three inches in diameter—planted them near the surface in good loam, and the following year, (they were disrooted in November,) they produced abundance of fruit, which was nearly worthless ; (this was expected ;) they grew very little—only a short spur-like elongation of the terminal

buds. The following year they bore the most beautiful crop of fruit I ever saw, and continued to do so for the three succeeding years, when they again became luxuriant and barren as before. To enumerate facts in favor of root-pruning would swell this paper into a volume, for these have been so numerous as to effect almost a revolution in the culture of fruit-trees, and to place its propriety and success beyond a doubt.

(*To be continued.*)

ART. VII. *General Management of the Calceolaria.* By
WILLIAM SAUNDERS, New Haven, Conn.

THERE are few plants possessed of more real beauty and interest than the *Calceolaria*. It is one of those plants that have been drawn from their natural and simple state, by careful cultivation, to form objects of great beauty and delicacy. Perhaps no flower has yielded so readily to the hybridizer as this; for, in a comparatively short period, they have been brought to great perfection. From a pinch of seed, flowers of every shade and color may be obtained, and, when grouped in masses in the greenhouse, never fail to attract particular attention.

I generally sow the seed about the beginning of August, to allow time for the plants gaining sufficient strength to keep comfortably over winter. I have found them succeed very well, when sown early in spring, but they are considerably later in flowering, and do not stand so long in bloom. Let a few six inch pots be filled two-thirds full of drainage and turfy pieces of loam, and mix a compost of loam, leaf-mould, and sand in equal quantities; make it fine, and fill up the pots with it, pressing it to a firm, even surface; sow the seeds, and cover them very slightly with a little fine, sifted soil; moisten the soil carefully, so as not to disturb the seeds, and place the pots in a frame, or in any sheltered situation, out of doors, covered with a hand glass; the soil must be kept in a healthy, moist condition, but not saturated, or they will disappear as quickly as they vegetate. After they have made four leaves, prick them off into pots or boxes, prepared as

above, only the soil may be used a little coarser. Plant them about an inch apart, and shade them carefully, and keep close for about a week, when they may be allowed a little air. As soon as they begin to crowd each other, they may either be planted again into boxes wider apart than at first, or potted singly in three inch pots. If the plants are strong, they may be potted singly with safety; the young roots incline to run near the surface of the soil, so this must never be allowed to get dry and hard. About the middle of October, place them in the greenhouse, on shelves near the glass; water them carefully during winter, and fumigate occasionally with tobacco, to keep them clear of insects.

About the month of February, shift them into six inch pots, in a soil of equal parts fibrous loam, leaf-mould, and rotted dung; drain these well, and turn out the young plants carefully, without injuring the roots; pot them deep enough to allow the fresh soil to come well up round the neck of the plants, for here they will emit numerous roots. They must now be judiciously supplied with water, and sprinkled overhead every morning, just as the sun reaches them. As they push up their flower-stems, secure them with a small stake, and, when coming into flower, shade them from bright sun, and let them have all the air possible, night and day.

They are easily propagated by the following treatment:—As soon as the blooming season is past, cut down the flower stems, and pick off all withered and decaying leaves. Select a quiet, shady situation out of doors, and plunge the pots well down in the soil, and fill up among the shoots with leaf-mould. Moisten the soil occasionally if the weather be dry; they will now throw out roots at every shoot; these shoots should then be taken off and potted separately, in three inch pots, in a mixture of light loam and leaf-mould. Place them under glass, where they can be kept close and shaded, and they will immediately start and grow rapidly; but, if exposed to currents of air, the juices of the leaves will be exhausted before the roots are strong and plentiful enough to supply the deficiency. When placed in their winter quarters, be careful, in watering, not to allow any to drop on the leaves; examine the plants, and if the pots are filled with roots, give them a shift; this will allow the roots to increase, and the

plants to strengthen ; when the roots are cramped, it has a tendency to throw the plant prematurely into flower, to its great injury at the proper blooming season. Instead of plunging the pots in the soil, place them in a frame and keep them close and moist ; water them occasionally with manure water, to get them into a strong growth ; and when they have made shoots of two or three inches in length, take them off, and make them into cuttings. Plant them in a well prepared cutting-pot, and place them in a temperature of about sixty-five degrees. If the pots are plunged into any material heated to this degree, so much the better ; keep them close and shaded, and pot singly when they are rooted. By keeping the old plant growing, two or three courses of cuttings may be obtained ; but, with any rare or scarce sort, the following method may be adopted to secure a stock :—After the shoots grow a short time, cut them through in the centre between each joint, and then cut each joint down the middle, thus making two cuttings of each of these joints, with a leaf to each ; this leaf must not be damaged in the least, for the success of the process depends entirely on it. Plant these in pots well prepared, as for sowing the seeds, with the addition of half an inch pure sand at top. Let the cut surface be placed perpendicularly against the side of the pot, and the back points of the leaves looking towards the centre. Put them in a close, warm frame, and in a short time they will be all finely rooted from the cut surface. Thus, hundreds may be propagated in a short time, from one plant.

To grow large specimens, when the plants are done blooming and cut down, stand them in any sheltered situation out of doors, and water sparingly. About the end of August, turn them out of the pots and shake away all the old soil from their roots. Prune and regulate these a little, and repot them in as small pots as can conveniently be done, in a light rich soil. Place them in a close, warm situation afterwards, admitting air by degrees, as they begin to grow. When taken into the greenhouse, let them have a situation near the glass ; they will keep growing less or more, all winter, and if the pots fill with roots, give them a shift to keep them on, and, about the middle of February, give them a final shift into the flowering pots, in a compost of two parts good, turfy

loam, one of leaf-mould, and one of well-rotted dung ; to this, add another part of sand and broken charcoal. These must be well mixed, but not made fine, for the roots delight to ramify in rough, lumpy material. Use twelve inch pots for large plants ; these must be perfectly clean, and properly drained ; pick off a leaf or two from the neck of the plant, and keep it well down in the pot ; make the soil moderately firm, and leave plenty of room for supplying water to the plant ; keep them near the light, and draw a syringe full or two of water over them occasionally ; this will keep them fresh and clean ; and, by having the surface of the soil always a little moist, they will grow vigorously and send numerous roots out of the sides of the stem, and from underneath the leaves ; at the same time, see that the mass of soil does not get too dry, for, although the surface of the earth may be thus kept moist, the interior part may be quite dry, and the plants consequently receive a check. A practised ear will know when a plant requires water by the sound of the pot. As the flower-stems lengthen, gradually widen and arrange them, so as to allow full benefit of light and air, keeping them in place, by tying neatly to light stakes. While in flower, they must be kept shaded, cool, and airy. The dry, arid weather of May and June will soon rob them of their beauty, if attention is not paid to shading from bright sun, and the atmosphere kept charged with moisture, by watering the paths, under the stages, and all vacant places ; if this is properly attended to, they will flower for six or eight weeks in the warmest of seasons, and display beautiful masses of their variously mottled, purse-like flowers.

Plants intended for hybridizing should be placed by themselves ; any two flowers of different colors, when crossed will produce innumerable intermediate varieties. With a small piece of wood, sharpened thin, scrape the pollen from the anther of the one, and apply it to the stigma of the other ; and, where several crosses are effected upon one plant, distinguish them by threads of different colors, carefully noting down the same, so that there may be no confusion when the seed is ripe. Assist the plants with frequent waterings of liquid manure, while the seed is ripening ; this will ensure

fine, plump seed, and gather it before the pods are fully ripe, as they are liable to burst, and the seeds disperse.

New Haven, Conn., February 12, 1849.

[If, after reading the above excellent article, by Mr. Saunders, and that by Mr. Kennedy, (p. 492) in addition to what has been said in our previous volumes, the amateur is not able to produce fine specimens of this most beautiful plant, it will not be for want of the most simple, plain, and concise directions for that object. Mr. Saunders's article was written some time since, and, in consequence of the appearance of Mr. Kennedy's communication, it was laid aside; but, at our request, he has kindly forwarded it for publication, though somewhat abridged from the original draft.

A flower so well worthy of universal cultivation as the calceolaria, and one which is yet so rarely seen in fine condition, deserves more than ordinary notice; and the results of the experience of every successful grower will be duly appreciated by all who prize such a delicate and varied flower as the calceolaria. Now is the time to sow seeds, when it has been neglected in the autumn, and if Mr. Saunders's directions are followed, a fine show of flowers may be obtained, from August to October.—*Ed.*]

MISCELLANEOUS INTELLIGENCE.

ART. I. General Notices.

Tree Mignonette.—The *Reseda odorata*, or common sweet Mignonette, treated after the following manner, forms a real treat in the conservatory, during the winter and spring months.

Sow in spring a number of small four-inch pots. When up, clear off all the plants but one in the centre; as it grows, train it upwards to a stick, until it is a foot high, or two if you please; do not allow any side shoots to grow on the stem, and remove all leaves to within a few inches of its top. When the plant gets as high as you wish it, top it, and then it will throw out side branches; as they advance, pinch off their tops, until you have formed a nice bushy head to your plant, and, above all things, do not allow any bloom to appear, until it has become strong, which will be by winter, if it has been well attended to. For the first winter, it will be advisable not to have them in larger than eight-inch pots. Mignonette being an annual,

if the seeds are not picked off after flowering, it is ten to one that the plant will die. I have had excellent Tree Mignonette, three years old—very bushy, and full of flower all winter. Mignonette is often neglected at mid-summer, when our hands are full of other work, and yet this is the very time when Tree Mignonette wants most care, for the flowers, not being wanted during summer, ought then to be removed, in order to have a fine winter display. To keep worms from entering and disturbing the roots, add a handful of soot at each shifting, over the drainage.

Mignonette delights in sandy loam, not too light, and, being a gross feeder, a little diluted manure-water may be given once a week with advantage. If this is contemplated, the mould need not be made so rich in the first instance.

Winter Mignonette, as it is generally called, requires to be treated differently from the above. It is generally sown about the 20th of August; if later, it will not acquire sufficient strength by winter for the London market. I generally grow from eight to ten plants, in a forty-eight-sized pot, which is six inches deep. For this sowing, it is safest to use a light sandy, and rather poor mould, for, if the latter is too rich and strong, the plants damp off during winter. Out of nearly a thousand pots, I have often scarcely lost one by attending to this, by not allowing a drop of rain to fall on them during winter, by never watering them unless they were flagging, and by admitting at all times plenty of air. In the case of frost coming, however, they are closely covered up, sometimes for a week or fortnight together; and, if you have not followed the above rules, you will suffer severely from damp. Do not expose your plants for some days after the frost breaks up, and that only by degrees; above all things, do not expose them to the sun. My anxiety to give them light, after being so long covered up, has sometimes led me, for the moment, to forget this, and I have suffered severely for my negligence.

Should the winter prove mild, the plants will root into the ashes they are placed on; therefore, they must be lifted up occasionally, to break the roots. Slugs will annoy you if you do not look after them; they fatten on Mignonette. To retard some of the pots, pinch the heads off the plants; by this means, they will not flower so strongly as those not pinched, and will yield a succession of bloom.—(*Gard. Chron.*, 1849, p. 52.)

Gooseberries and currants.—If not done before, it will soon be time to prune gooseberry and currant trees; vegetable life is in activity much earlier in their case, than with other fruit trees, and it is always desirable that pruning should be finished while the tree is in a state of rest. Every advancing bud which is cut off, is so much abstracted from those which remain, and the life, thus wasted, ought to have been concentrated in the tree. From the shoots now cut off, select some of the best as cuttings, which will root immediately, if put in now. On the right management of these cuttings, the well-being of the future tree, and the comfort of the cultivator, will depend, and therefore a little trouble should be willingly incurred. Select strong shoots, and let the end to be inserted in the earth be cut sharp and clean to a bud; allow 3 or 4 inches to be buried in the soil, and 8 for

the stem above ground ; 8 inches, I mean, exclusive of the part which is to form the head of the tree, which must consist of three or four buds, so arranged round the axis, that the future branches shall be at equal distances from each other, so as to secure a cup-like form, when the head advances. Having determined on the buds to be preserved, carefully exterminate all the rest, especially those on the part to be inserted for the roots. If this is not done, you will be troubled with suckers every year, a pest you will be free from, to a great extent, if this rule is attended to. I was about to make a more positive statement, but I remember finding suckers proceeding from the larger roots, and even from parts of the stem, where there was previously no bud. Do all you can to prevent the evil, and its existence must then be provided against, in the best manner afterwards, should it occur.

In two or three years, the cuttings will have good heads, and they may then be placed in the situations they are finally to occupy. At that time, it will be proper to determine whether you will grow them as standards, or espaliers, the latter mode being adopted with success, especially in the case of those gooseberries, of a trailing habit of growth, peculiar to some of the best varieties, which makes it very difficult to form a good head. This determination refers more to the position in which the trees are to be planted, as it is manifest that the training of the bush must be regulated from the first, so as to make it an espalier or standard. In both cases, avoid close planting, by which nothing can be gained, but most probably much will be lost. Keep the soil around them free from weeds, and dig in every year a little well-rotted dung. To prevent the ravages of the caterpillar, it has been recommended to remove the surface soil every autumn, and replace it with fresh, brought from a little distance. It is said that the eggs are deposited near the trees, and are thus removed. A little quicklime, sprinkled over, might be equally effectual. I must confess, I feel a little ashamed of being obliged to speak doubtfully on this important subject, but I am not acquainted sufficiently with the habits of this insect, to speak positively, yet few persons have suffered more severely from its ravages, than I have.

We now return to the point whence we set out, the annual pruning of the trees. First cut away as much of the bush, as will leave it accessible to sun and air, and preserve a compact and open arrangement of the branches. If the tree is old, remove as much as you can of the older wood, and introduce young shoots in its place. Gooseberries and currants bear on last year's wood, not exclusively, but principally, and yet a very different mode is adopted for each. The former are trained so that last year's growth shall remain as long as possible, one or two buds only at the extremities being cut off. Currants, on the contrary, are spurred, each new shoot being cut down to within two buds, a few leaders excepted, for the future enlargement of the tree. The same plan may be adopted with the gooseberry, but it will have this disadvantage ; the fruit will be too crowded to allow of proper expansion, whereas, the pendent form of a bunch of currants allows of closer quarters. Summer pruning should not be neglected, as there can be no doubt that the removal of the profuse growth of that season, judiciously,

will throw greater strength and maturity into that which is permitted to remain.

If very large fruit is wanted, the berries must be thinned out, and liquid manure applied, but a separate paper would be necessary to detail all the arts and crafty ways of gooseberry fanciers. In picking fruit for use, let direction guide your hand, as a thinning equally all over will do more good to the remaining berries, than the common practice of stripping whole branches at once.—(*Gard. Chron.*, 1849, p. 52.)

Cultivation of Celery.—In our last number, we copied an article on the cultivation of this fine vegetable, and now present our readers with the following. Mr. Cole presented some of his celery for exhibition, and with it he communicated his mode of cultivation as follows :—

Herewith I take the liberty of handing you six sticks of Celery, of a kind which I have grown for the last three years, and which, I think, both in point of size, solidity, and flavor, will be found superior to any which has hitherto been cultivated. The specimens sent are not selected, but are merely examples of a general crop, planted without any object in view, beyond that of the supply of my employer's table, and entirely without ever thinking of sending any of it for public exhibition. My stock consists of six hundred plants, planted in rows, four feet apart, and the plants nine inches apart in the row ; and I have not a doubt that the whole crop would average six pounds per stick. Not the least remarkable excellence in this Celery is, that it will stand twelve months without running, or starting for seed, and such a thing as a pipy or stringy leaf, I have never noticed, so long as I have grown it. For a more substantial detail of my method of cultivation, I may remark, the seed was sown the first week in February, and so soon as the plants were large enough, they were pricked out in garden soil, rich in vegetable matter, under hand-glasses. The trenches were prepared in the usual manner, in the first week in June, by excavating them nine inches deep, and digging in a good dressing of the spent dung of an old Mushroom bed. The plants were, of course, strong when they were planted out, and each was removed to the trench with a good ball of earth adhering to the roots, so that (afterwards receiving a copious watering) they sustained little or no check. In earthing Celery, I generally endeavor to steer between the two extremes of frequently earthing, and earthing only when the plants are full grown, believing that a little earth, after the plants are fully established in the trenches, say a month after planting, promotes the rapid growth of the plants, more especially if they receive a good soaking of weak liquid manure, or soot-water, a day or two before they are earthed. Soot-water is an excellent manure for Celery ; and where worms and other insects are troublesome, a little dry soot dashed along the rows will be found a preventive of their ravages. The kitchen garden here being upon a boggy subsoil, and the level of the river Dart, which passes through the grounds, I do not find it necessary to water the plants more than once or twice after they are planted out ; but, in more elevated situations, it is almost impossible to give too much water, always, however, preferring to give a thorough soaking once every fortnight, rather

than daily dribblings, which, in my opinion, do more harm than good. Were I so disposed, I have no doubt I could grow this Celery double the size of that sent; and to effect this I should prepare the plants as before directed, excavate the trenches eighteen inches deep, and the same in width, and fill them with a compost consisting of good turfy loam, peat, and leaf-mould, or thoroughly decomposed cow-dung, in about equal quantities. Very rich dung is not good for Celery, and strong manure-water should also be avoided. To grow large Celery, it would be necessary to place the plants eighteen inches apart in the row, and the ground should be kept constantly stirred about the plants, taking great care, however, to prevent the soil getting into the hearts of the plants during the operations. In a late number of the "*Journal of the Horticultural Society*," I perceive Mr. Errington attributes the coarse and bad quality of the large Celery grown for market, to the luxuriance of its growth. Here, I venture to assert, he is wrong. The bad quality of the Celery is attributable to the bad kinds grown, as I am quite sure no person could grow this kind of Celery, which has been named Cole's superb Red, so as to either make it either pippy or stringy, or inferior in flavor. Late earthing has more to do with making Celery stringy than any thing else, as it is quite certain, if the leaves of Celery are exposed to full light and dry air for a length of time, the tissue will become harder than if the leaves were grown in comparative darkness. We need no stronger proof of this than the acrid flavor of the outer as compared with the inner leaves of the same Celery, a fact demonstrating that, if the leaves are exposed for a long time, they acquire an acrid flavor which no blanching can wholly remove. For an early crop of Celery, I sow in heat, early in January, and prick the plants out upon a slight hot-bed; for a second crop, in February, in heat, as before directed, and for a late crop in March, in the open garden.—(*Gard. Chron.*, 1849, p. 23.)

ART. II. *Domestic Notices.*

Summer Pruning Dwarf Pear Trees.—I have some fifty varieties of Dwarf pear trees, and I have been in great doubt as to the best mode of pruning them; and, though I have read, with much pleasure and profit, the articles which have been published in your Magazine on the subject, my doubts have not been removed. Most of my trees have only been set one year, and the others, but two. I have, therefore, but little experimental knowledge on this subject. Last spring, I concluded to adopt the mode recommended by your correspondent, Carmichael, in his article published in the volume of your Magazine for 1844; that of stopping the shoots, when about one foot long, but I found that they would push again and again. In your remarks upon Mr. Bissell's article, on page 551, of the last December number of your Magazine, you say, that the side-shoots should be nipped off, to one or two buds, and these shoots then become covered with fruit-buds. If I were to nip mine so, I am sure that both buds would push: they did last summer, almost invariably, although left ten or eleven inches long. How can these side-shoots become covered with fruit-buds, if both buds left push? But

does not your mode come within the objection in Mr. Carmichael's article, that there will not be leaves enough left to elaborate the amount of sap necessary to support the necessary functions of the tree, and thus stimulate the remaining buds, (that is, the one or two to which you nip the shoot,) to grow and become shoots instead of fruit-buds. I have seen the trees referred to by Mr. Bissell, and I should judge that he had practised stopping them at from four to six inches; and I found the first buds almost invariably on the wood of the previous years, and not on that of last summer. Judging from what little experience I gained last summer, it seems to me, that the best mode would be that recommended by Mr. Rivers, in your August number, for 1848, page 361. I think the leading shoot, and the fore right shoot being left on each branch, would have the effect to prevent the buds on the shoots stopped, from pushing. (I stopped every shoot, at ten or twelve inches.) But yet, this might not have the effect of checking the tree enough to make it form fruit-buds. My experience does not guide me in determining, it being so limited. Will you, if you have time and space, give me a hint or two in reference to the above, before the time for pruning next summer? It seems to me that your mode conflicts with that of Mr. Carmichael. I have been anxiously looking for your promised article and plates, explanatory of pruning and training dwarfs.—*Yours, &c. M. L. B., Lockport, N. Y., February, 1849.*

[We are glad to aid our correspondent in any way which shall enable him to accomplish the object he desires, viz., Dwarf pear trees with an abundance of fruit-buds. We have ourselves found little or no difficulty in pruning our young trees, so as to produce an abundance of fruit-buds, in the space of three or four years, even on trees grafted upon the pear. And we shall endeavor to give our promised article on summer pruning, with engravings, in season to aid him, as well as other amateurs, who are looking for the desired information, the coming summer. For the present, we will only refer to one or two remarks in the above communication. At the page referred to, (Vol. XIV. p. 551,) where we appended a few words to the communication of Mr. Bissell, we did not state that the shoots would become covered with fruit-buds the *same season* they were pruned, though they will do so on trees on the quince stock, and often upon the pear; but we supposed it would be understood that short spurs would be formed, which would, the succeeding year, perfect fruit-buds. There is no danger, by our mode of pruning, of there not being leaves enough left to elaborate the sap; an abundance of shoots are produced, and consequently a greater number of leaves; and what is of material consequence, and this is the great benefit of summer pruning—every leaf is matured, and the sap more equally elaborated all over the tree.

The shoots first stopped will always push a second time, and, if so, they are stopped again; if they push a third time, they are again pinched off; it will then be late in the season, the sap less abundant, and if the trees are upon the quince, fruit-buds will often be formed at the eye next to where the shoots were stopped last; if not the same year, then the following one; but pinching has the effect of *elongating* the buds on the branch *below*

where it was stopped, which often become fruit-spurs, the same year, or if not, the following one.

There is no objection to the plan recommended by Mr. Rivers, (Vol. XIV. p. 361,) of leaving a foreright shoot; we often leave two of these shoots, stopping them entirely at the length of six inches, in very vigorous trees, like the Beurré Diel, Le Curé, and Harvard, and, at the winter pruning, cut them back to two buds, as we do all spurs with more than two or three eyes; at the same time pruning the terminal shoots so as to form a symmetrical tree. The repeated pushing of the shoots after pinching off the ends of them, does no injury to the tree; though the best results are not obtained by doing this indiscriminately on all trees. As Mr. Carmichael has stated, "the operator should be guided by the health and vigor of his trees, the soil and situation in which they grow; these circumstances must be taken into consideration to perform the operation aright."—*Ed.*]

Seedling Lycopodiums.—A beautiful little moss-like plant, under the name of *Lycopodium helveticum*, has become an object of much care, for covering shady borders, in greenhouses, especially where such borders are made at the foot of the back or side walls, in which are planted roses, or other climbing plants. Delighting in shade and moisture, it, in this way, adds much to the neat appearance of the house. At certain seasons of the year, the stem assumes an unusual form, the leaves on this *new* stem, or branch, are more closely set, and at the base, or in the axil of the leaves, may be found a small yellow grain. This, if closely examined, will be found to consist of a kidney-shaped seed-vessel, in which there is a quantity of yellow dust. The whole together compose the spike, or fruit-bearing branch of the plant. Nothing like flowers are perceptible, as the plant in question belongs to the class of Cryptogamia, in which floral organs are only dimly and obscurely typified.

It may not be familiarly known, that this little plant can be artificially cultivated from its seeds, (sporules.) But, having procured some specimens of this species, while in fructification, I was afterward gratified to find several seedling plants rising in the soil of my pots. Their first appearance was that of a single leaf on a very short stem, in no way differing from the leaves of the perfect plants; others soon succeeded, until, in a few weeks, each stem had elongated itself to the size of several inches, and was creeping over in surface, in the manner peculiar to the species,

This *Lycopodium*, (now called *Selaginella*,) is also a pretty object for pot culture, by itself, and may be suspended in such a way, according to each one's taste and fancy, as that its delicate stems, and silver thread-like rootlets, hanging over the edge of the pot, would afford much pleasure to a lover of the simpler forms of vegetables.—*Yours, John Lewis Russell, Feb. 3, 1849.*

See Groundsel Tree, or Ploughman's Spikenard.—Specimens of this fine Syngenesious plant, have been forwarded from Nantucket, by Miss Maria L. Tallant, as detected by her uncle, last October, on that part of the island, called Coskaty, which is famed for its floral treasures. Two of these specimens were sent to me, and are supposed to be the first known as indigenous to Massachusetts. The *Baccharis halimifolia*, (the species under no-

tice,) has "bright, light green leaves, and the down of the seed is of a pure white, round the bottom of which, the involucre contracts closely." Considering that we have here a shrub, attaining to the height of even twelve feet, and of such unique character, its occurrence in our State may be hailed with pleasure by all lovers of its Flora.

It is described more particularly in botanical manuals, as a shrub anciently dedicated to Bacchus; though for what reason, we are not informed. Its leaves are obovate and oval, incisely toothed near the summit, furnished with a compound leafy panicle of flowers, and succeeded by very long silky white seeds.

Prof. Gray, in his *Botany of the Northern United States*, informs us of its occurrence on sea beaches, from Connecticut to New Jersey, and southward. And Elliott, in his *Sketch of the Botany of South Carolina and Georgia*, mentions its being very generally diffused over the lower country of those States; preferring damp stiff clay land, but growing indiscriminately in fresh or brackish soils. Flowers in September.—*Respectfully Yours, John L. Russell. South Hingham, Feb. 13, 1849.*

North American Pomological Convention, at Syracuse, N. Y.—We have been greatly surprised to notice the course which has been taken by the *Albany Cultivator*, and the *Horticulturist*, in relation to the second meeting of the North American Pomological Convention, to be held in Syracuse, in September next. We are not such sanguine believers in the great results to be obtained by pomological conventions, as some of our friends, but if any good is to come of them, the more that are held, the better. Our cultivators are numerous enough, and our country extensive enough, to admit of more than one convention, without interfering with each other.

If, however, it should be thought, that but one NATIONAL convention ought to be held, why then we think that the one which was first in the field, should have the credit of being so; and, if its labors have been valuable to the pomological world, that it should not only be perpetuated, but receive the aid and assistance of every cultivator in the Union. It will not be denied, that the convention at Buffalo, last September, was the first national one ever projected. Early in the spring of 1848, circulars were sent to the various horticultural societies of the country, inviting them to send delegates to a convention, to be held at Buffalo, and it was not till late in the summer, that any intention was manifested of having another at New York. Had a conciliatory spirit prevailed, they might undoubtedly have been merged into one; and such arrangements made, that they might have been held in different cities, from year to year, thus obviating any objections to two conventions, if such there in reality be; but, from some cause, a union was not attempted, and the separate conventions were held in the autumn of 1848.

We had supposed, that, if there had been any feelings of rivalry or jealousy between the two conventions of last year, that they had long since been forgotten. Such, however, does not seem to be the case, for since the issue of the *Circular*, which we published in our last number, (p. 131,) an attempt

has been made to make the friends of the Buffalo convention believe that the circular was "entirely *anonymous*!" emanating from nobody; that the New York State Agricultural Society does not recognize any such body as the North American Pomological Convention; and, finally, that gentlemen who have been appointed on State committees, are apprized that they receive the compliment from an authority "altogether unknown!"

Such statements, deliberately made, either show a total want of information upon the subject, or an intention wilfully to misrepresent. Any one who turns to our notice of the Buffalo convention, (Vol. XIV., p. 550,) will see that the following committee was appointed to call a future convention, viz. :—

J. D. G. Nelson, Indiana; James Dougal, C. W.; F. R. Elliott, Cleveland, O.; Dr. J. C. Holmes, Michigan; Dr. H. Wendell, Albany; L. F. Allen and N. Goodsell, N. Y.

And we now state, that the committee were UNANIMOUS in their recommendation of the circular above alluded to; there was no necessity to append their names, as it was widely known, that, at Buffalo, it was resolved to call the meeting the NORTH AMERICAN POMOLOGICAL CONVENTION, and to hold it ANNUALLY.

As regards the connection of the New York State Agricultural Society, with the convention, it is perfectly well known, that no such connection exists. No one ever said, or pretended, there was. The convention is an INDEPENDENT body,—acting of itself,—and by itself,—under the influence of no society. The State society, however, *does* feel a great interest in the convention,—so much so, that Mr. Johnson, the able secretary, appended the following notice to the list of premiums, offered by the society, for 1849 :—

"North American Pomological Convention.—This body, organized at Buffalo, last year—appointed their meeting the day succeeding our show. It will open its sessions on Friday, the 14th of September, and those sending fruit, will please direct to the care of P. N. Ruess, Syracuse. It is expected that this convention will be the most important one ever held in this country, on the subject of pomology—and it is hoped its deliberations will be most useful to all those who are desirous of advancing, for the good of the public, the true interests of this most important branch of national industry."

It is not necessary for us to occupy more room upon this subject. No gentleman who has been appointed upon the State committees, will, for a moment, be influenced by any thing which has emanated from the *Horticulturist*. But persevering in their duties, we hope the committees will be enabled to bring together such a mass of information, as will at once set at rest all doubts as to the utility of future conventions.

We inadvertently omitted, in our last, to give the names of the committee for Massachusetts; they are as follows :—

Gen. H. A. S. Dearborn, of Roxbury, *Chairman*. C. M. Hovey, of Boston, J. S. Cabot, of Salem, J. Washburn, of Plymouth, H. H. Crapo, of New Bedford, George Jacques, of Worcester, Rev. A. R. Pope, of Kingston.

ART. III. *Albany and Rensselaer Horticultural Society.*

THE annual meeting of the society was held at the Old State Hall, Albany, on the 14th of February,—Joel Rathbone, the President, in the chair.

The annual report of the treasurer was accepted, and the meeting proceeded to the choice of officers, for 1849, when the following persons were elected :—

President—Joel Rathbone.

Vice Presidents—V. P. Douw, Greenbush ; Herman Wendell, M. D., Albany ; E. P. Prentice, Bethlehem ; Stephen E. Warren, Troy.

Secretary—B. P. Johnson, Albany.

Treasurer—Luther Tucker, Bethlehem.

Managers—Amos Briggs, Schaghticoke ; J. M. Lovett, Bethlehem ; W. Buswell, Troy ; L. Menand, Watervliet ; J. McD. McIntyre, Albany ; B. B. Kirtland, Greenbush ; James Wilson, Albany ; William Newcomb, Pittstown ; A. Osborn, Watervliet.

The various standing committees were also elected.

Meetings for 1849–50.—At the request of the members of the society, from the northern part of Rensselaer County, it was *Resolved*, That the exhibitions for the summer of 1849, and winter of 1850, be held at the State Hall, in the city of Albany, on such days as the executive committee may hereafter designate.

A fine display of flowers and fruits was made at this meeting, and the whole passed off much to the gratification of the members and the public.

The principal exhibitors of flowers were the president, L. Menand, J. Dingwall, and James Wilson. The following premiums were awarded :—

For the best six plants in pots, to L. Menand, \$2.

For the best display of cut greenhouse flowers, to L. Menand, \$2.

For the second best do., to Col. Rathbone, \$1.

For the best round hand bouquet, to Col. Rathbone, \$1.

For the best display of cut camellia japonicas, with foliage, to J. Dingwall, \$3.

For the best six varieties of Chinese primroses, in pots, to J. Wilson, \$2.

For the best ten distinct varieties of pansies, in pots, to J. Dingwall, \$2.

And a discretionary premium of \$5, to Wilson Flagg, Esq., of Boston, for a very magnificent grass bouquet, composed of the several varieties of grass, grown in the vicinity of Boston, and arranged with consummate taste and skill.—J. M. LOVETT, *Chairman*.

The exhibition of fruits was excellent for the season. From Ezra P. Prentice, Newtown Pippin, *Æsopus Spitzenberg*, Kilham Hill, Chandler, English or Poughkeepsie Russet, Winter Pearmain, Vandervere, Ancient Briton, and four varieties of apples. By Dr. H. Wendell, R. I. Greenings, *Æsopus Spitzenberg*, and Swaar apples, Haddington pear, from Philadelphia, Inconnue Van Mons, and Winter Virgalieu pears. B. P. Johnson presented, from Hon. A. Wilcox, of Herkimer County, Winter Pearmain, and Cheeseboro' Russet apples. By B. Hodge, of Buffalo, Twenty Ounce apples. By Hon. John A. King, of Jamaica, Newtown Pippin. By H.

Snyder, Kinderhook, Royal Russet and Lady apples. By C. Bellinger, Herkimer County, Middle apples. By H. Hooker, Rochester, Bellefleur apples. By J. H. Watts, Rochester, Northern Spy apples. By F. W. Lay, Greece, Black Gilliflower and *Æsopus Spitzenberg* apples. By Montreal Horticultural Society, Pomme Gris, Twenty Ounce, Newtown Pippin, and *Æsopus Spitzenberg* apples. By J. Delafield, Seneca County, Newtown Pippins. By B. P. Johnson, red Bellefleur, Gloria Mundi, Tolman's Sweet, and Rock apples. By E. E. Platt, of Albany, very beautiful specimens of the Pound pears. By W. D. Osborn, of Port Byron, Red Bellefleur apples.

The following premiums were awarded:—

For the best exhibition of apples, to E. P. Prentice, of Mount Hope, \$2.

For the best variety of winter pears, to Dr. H. Wendell, of Albany, \$2.

—HERMAN WENDELL, *Chairman*.

ART. IV. *Massachusetts Horticultural Society.*

Saturday, January 30th, 1849.—An adjourned meeting of the society was held to-day,—the President in the chair.

Mr. Stickney, from the Finance committee, made their annual report, as follows:—

RECEIPTS FOR THE YEAR 1848.

Balance on hand,	\$ 47 35
From Mount Auburn Cemetery,	4,495 09
Rent of store and hall,	1,927 50
Dividend on stock, &c.,	384 79
Transactions sold,	250 00
Assessments and fees,	1,192 27
Donation of S. Appleton,	200 00
Donation of Jos. Bradlee,	500 00
Sundry receipts, exhibitions, &c.,	367 12
	<hr/>
	\$ 9,364 12

PAYMENTS FOR THE YEAR 1848.

Stocks purchased,	1,398 75
Repairs of hall,	414 12
Cost of transactions and printing,	1,819 72
Annual festival,	980 99
Door keeper, &c.,	476 00
Premiums, &c.,	1,350 00
Library,	168 35
Interest on mortgage,	750 00
Miscellaneous expenses,	7,924 49
Balance in the treasury,	41 70
	<hr/>
	\$ 5,364 12

PROPERTY OF THE SOCIETY.

Building,	\$ 36,000 00
Furniture of Hall, &c.,	1,835 00
Library,	1,468 00
Stocks,	3,700 00
Appleton and other funds,	3,500 00
	<hr/>
	\$ 46,503 00

The only debt of the society, except some few outstanding accounts, is the mortgage of \$15,000 00

On motion of Mr. Newhall, it was voted, that the finance committee be requested to negotiate for the payment of the present mortgage, when it becomes due in May.

The president advised that a semi-annual show of roses, &c., should be held in June, and the subject was referred to the committee of arrangements, to report at a future meeting. He also recommended that a catalogue should be published, of all the varieties of fruit, which had been exhibited at the rooms of the society, from its organization up to the present time, with the names of the exhibitors. Referred to the fruit committee.

D. T. Curtis, and J. H. Bufford, of Boston, were elected members.

Adjourned 2 weeks to Feb. 3.

Exhibited.—**FRUIT**: From E. M. Richards, Echasserie pears. From H. Vandine, four varieties of pears. From Mr. Baldwin, very large Catillae pears. From J. S. Cabot, Brande's St. Germain pears, very fine.

At the meeting of the 13th Jan., J. F. Allen exhibited Syrian and Black Hamburg grapes, of last year's crop.

January 27th. Exhibited.—**FLOWERS**: From M. P. Wilder, a seedling Camellia, called Maria Louise, a crimson flower, occasionally spotted and marbled with white, regular form, double and imbricated; also cut flowers of *Spiræa prunifolia pléno*, *Acácia spectábilis*, *E/pacris pulchélla*, and *E. impréssa álba*, fine specimens.

February 3d.—An adjourned meeting of the society was held to-day,—the President in the chair.

Mr. Wilder, from the committee appointed to settle with Mount Auburn Cemetery, reported that they had attended to the duty, and that the sum of \$2,582 43, the society's proportion of the proceeds, had been received, and paid over to the treasurer.

Mr. Breck, chairman of the committee of arrangements, reported that the 21st Annual Exhibition should be held on the 18th, 19th, 20th, and 21st of September next.

A bill for painting fruits was presented by Mr. Sharp, and, on motion of Mr. Haggerston, it was voted that the treasurer pay the same.

L. B. Comins and L. S. Beecher, of Roxbury, were elected members.

Adjourned one week to Feb. 10th.

Exhibited.—**FRUIT**: From J. Washburn, of Plymouth, Holmes apple, which the committee pronounced fine, and deserving of extensive cultivation. From J. F. Allen, grapes of last year's growth.

February 10th.—An adjourned meeting of the society was held to-day,—the President in the chair.

On motion of C. M. Hovey, it was voted, that premiums, to the amount of \$50, be given at the semi-annual exhibition in June, the committee to report a schedule of prizes at a future day.

Adjourned for one week to Feb. 17th.

Exhibited.—**FLOWERS:** The exhibition of camellias for premium took place to-day; and the following varieties were shown:—From M. P. Wilder, twenty varieties, among which were Pirzio, Saccoi nova, Madiolalensis, Sarah Frost, Floy's New York, tricolor, Henry Favre, Donckelaeri, and two seedlings.

From Messrs. Hovey & Co., sixteen varieties, among which were Hempsteadii, Abby Wilder, reticulata, Vauxii, Fløyii, Duchesse of Orleans, and a seedling of great promise; the flower was small, being from a weak plant; it is of the most symmetrical form, full double, beautifully imbricated, a perfectly round petal, without any notch or indentation whatever; the color pure white, with a delicate stripe of bright pink through the centre of each petal.

Messrs. Hovey also exhibited cut flowers of several fine seedling azaleas. From John Quant, Erica Macnabiana, and Clématis azurea. The premiums for camellias were awarded as follows:—

CAMELLIAS. For the best 12 flowers, to M. P. Wilder, \$8.

For the second best 12 flowers, to Hovey & Co. \$6.

FRUIT: From J. A. Kenrick, Cogswell apple, a handsome and good variety. From J. S. Cabot, Brande's St. Germain pear, which the committee think well worthy of cultivation. From C. F. Putnam, of Salem, Hubbardston Nonsuch apples, but rather past the season.

February 17th.—An adjourned meeting of the society was held to-day,—the President in the chair.

A letter was received from the Antiquarian Society, requesting copies of the transactions of the society, scions, &c., &c. Voted, That the corresponding secretary forward the same.

The committee on publication submitted a report, which was accepted, recommending the society to publish one more number of its "Transactions with Plates," to complete the series.

Edward Rice, of Dorchester, and David A. Simmons, of Roxbury, were elected members.

Adjourned two weeks to March 3d.

HORTICULTURAL MEMORANDA

FOR APRIL.

FRUIT DEPARTMENT.

Grape vines will now come forward rapidly, and, by the middle of the month, will begin to open their blossoms. As soon as this is perceived, all syringing should be dispensed with, and the damping of the walks less

frequent ; a rather higher temperature should be kept up, and, if cold stormy days occur, fires should be kept on during the day. The spurs will now have grown so far, that, as they are tied out to the trellis, the strongest may be stopped two eyes beyond the cluster of buds. Disbud all superfluous shoots, leaving only those that are wanted to make wood for next year. The temperature, after the flowers begin to open, may be from 55 to 60 degrees at night. Vines in cold houses should now be uncovered, and tied loosely up to the trellis, giving them the same treatment as we recommended for vines in the grapery in February. Vines in pots should be liberally watered, giving them liquid guano after the berries are well formed. Vines in the open air may yet be pruned ; they will bleed a little, but no danger need be apprehended from this.

Fig trees in pots will now be showing fruit, and should be duly watered.

Peach trees in pots, that have set their fruit, should be well watered.

Strawberries in pots should be liberally watered, giving liquid guano occasionally, and keeping them on a well-aired shelf near the glass. Beds in the open air should be uncovered the first good warm weather, raking off merely the coarsest litter first, and dressing the beds afterwards. New beds may be made the last of the month.

Raspberry plantations should now be uncovered, and new ones made if they are wanted.

Grafting trees of all kinds should be attended to now. Plums and cherries should be got through with first, and then pears and apples. Scions may yet be cut.

Pruning all kinds of trees should now be done before a press of other work will require so much time that it may be neglected. Wall or espalier trees should be put in fine order early in the season.

Fruit of all kinds should be transplanted now.

Pear, apple and cherry, and other stocks should be planted out as soon as the ground is in a good state.

FLOWER DEPARTMENT.

Pelargoniums should now be in a vigorous state of growth ; if they have been properly attended to, the plants will now begin to throw up their trusses of buds, and, by the middle of the month, will begin to bloom ; that is, those intended for blooming in May : those to succeed them in June will not be so forward, and the third set for flowering in July should have the shoots immediately stopped, so that they may break strong, and in good season. By attending to this, the season of blooming may be prolonged from April to August. Water once a week with liquid guano. Air the house early to keep off all damp ; and fumigate to destroy the green fly.

Camellias will now be making their growth, and will require repeated syringings and good supplies of water at the root.

Japan lilies will now be so far advanced in growth that they may soon have a shift into the next size pot, especially those intended for large specimens.

Azaleas done flowering should be repotted, pruned into shape, and placed in a warm situation, if large and fine specimens are wanted.

Cinerarias done flowering may have their tops cut off, and the plants removed to a cold frame.

Tulip and *hyacinth* buds will require to be immediately uncovered; as soon as the shoots are well above the soil, choose a good dry day, and carefully stir the surface of the earth with a stick or the hand; nothing invigorates their growth more than this.

Ranunculus beds should be covered half an inch deep with sand: this will prevent the drying winds from cracking and hardening the surface.

Carnations and *Picotees*, wintered in pots in frames, should now be shifted into a larger size, if it is intended to grow them in pots; and if in the ground, a bed should be got ready, and prepared to receive them.

Pansies, in pots or in frames, should soon be transplanted to a well prepared bed, so as to get well established before dry weather; sow the seeds now for a succession of bloom.

Calceolarias will need one more shift into the size they are to bloom. Seeds may be sown now for a succession.

Achimenes and *Gloxinias* of all kinds, will need another shift into larger pots.

Fuchsias should now be propagated from cuttings; plants already potted off, will need a shift into a larger size.

Cactuses should now be liberally watered.

Chrysanthemums should now be propagated from cuttings.

Ericas and *Epacris* should now be headed well in, and placed in a cool and airy situation, until the weather is sufficiently mild to admit of their being planted in the open air. Propagate from cuttings now.

Hydrangeas, both *japonica* and the *hortensis*, should now be shifted into larger pots.

Tuberoses should now be planted, and placed in a hot-bed, to forward their growth.

Ixias, *sparaxis*, and other bulbs, done blooming, may be placed away on an airy shelf, and sparingly watered.

Gladiolus gandavensis, and other summer flowering kinds, may be planted out in the open ground, the last of the month.

Peonies, both the tree and herbaceous sorts, should now be transplanted.

Rocket Larkspur seeds should be sown early, as the plants bloom much stronger, than when the sowing is delayed.

Balsams, *Asters*, *Stocks*, and other showy annual flower seeds, should now be sown in pots or boxes, and brought forward in the hot-bed, for early blooming.

Daphne odora may now be propagated from cuttings.

Roses should be pruned as soon as convenient, as they push stronger than when the work is delayed.

Neapolitan violets in frames, should be liberally watered.

Herbaceous plants of all kinds may be transplanted this month.

THE MAGAZINE OF HORTICULTURE.

MAY, 1849.

ORIGINAL COMMUNICATIONS.

ART. I. *Descriptions and Engravings of Select Varieties of Pears.* By the EDITOR.

IN our Retrospective View of the Progress of Horticulture for 1848, (p. 6,) we named several new varieties of pears which had proved to be valuable acquisitions to American collections, and stated that we should describe and figure them in the course of the current volume. We now present an account of six of them, among the number, four of the most remarkable ones, viz., the *Excellentissima*, *St. Dorotheé*, *Brande's St. Germain*, and the *Walker*; the latter one of Dr. Van Mons's seedlings, sent to the late Mr. R. Manning without name, as No. 135 of his great collection, with a request that he should name such as proved valuable; and, in accordance with this request, Mr. Manning the younger has called it the *Walker* pear, in honor of Samuel Walker, Esq., President of the Massachusetts Horticultural Society, a compliment which, we are happy to add, is most worthily bestowed. We commence our descriptions with this fine pear.

103. WALKER.

No. 135 Van Mons, *Mag. of Hort.*, Vol. XII, p. 147.

In our volume for 1846, above referred to, Mr. Manning gave a brief account of this pear, (*fig.* 17.) The scions were among a large lot of numbered varieties received by Messrs. Kenrick, Manning and Dearborn, from Dr. Van Mons, in 1836, and the tree came into bearing four or five years ago. In

size, it ranks among the largest pears, and, in general form, it is somewhat like the Dix. Our outline is from some fine specimens received from Mr. Manning in the fall of 1847.

We have so often, in describing many of the new pears introduced through the exertion of the gentlemen above named,



Fig. 17. Walker Pear.

spoken of the debt of gratitude due to them from the cultivators of this country, that we need not extend our remarks here. The best evidence of the immense benefits which have resulted from their correspondence with Van Mons is found from the fact that, in the great number of varieties which

have been described and figured in our Magazine for fourteen years, either by ourselves or by Mr. Manning, amounting to upwards of three hundred, more than fifty of them were among those sent to Messrs. Kenrick, Manning, and Dearborn, in 1834, '35, and '36.

The tree is a vigorous and healthy grower, with an erect and upright habit, and the wood is of a yellowish brown. It is also a good bearer, and ripens its fruit well.

Our description is as follows:—

Size, large, about three and a half inches long, and two and a half in diameter: *Form*, oblong pyramidal, broad and slightly flattened at the crown, and tapering regularly to an obtuse point at the stem: *Skin*, fair, smooth, yellow when mature, broadly tinged with pale red on the sunny side, and thickly covered with large green and russet specks: *Stem*, medium length, about one inch long, moderately stout, curved, and slightly inserted in a shallow cavity, on one side of a small projection: *Eye*, medium size, open, and sunk in a very small, round, rather shallow basin; segments of the calyx long, and partially reflexed: *Flesh*, white, little coarse, melting and juicy: *Flavor*, rich, saccharine, sprightly, perfumed, and excellent: *Core*, medium size: *Seeds*, medium size, light brown. Ripe in November.

104. EXCELLENTISSIMA. Kenrick's *American Orchardist*.

Much has been said of late about reducing the great number of pears in cultivation, and also, of the prevailing mania, especially among the Boston pear cultivators, of adding every new sort to the already greatly extended list of varieties which fill our catalogues. No experienced pomologist will pretend to doubt that there are many kinds which may be judiciously discarded from cultivation, but to talk of reducing the number to twenty or thirty, or to say that there is not more than that number of really good pears, is perfectly absurd.

Equally absurd is the attempt to make some cultivators believe that we have already good pears enough, and that it is little else than folly to run after all the new varieties which are enumerated in foreign catalogues. We would not waste

time and room in arguing this question with those who have made such assertions. Acting under such impressions, our collections would soon be deficient in some of the choicest

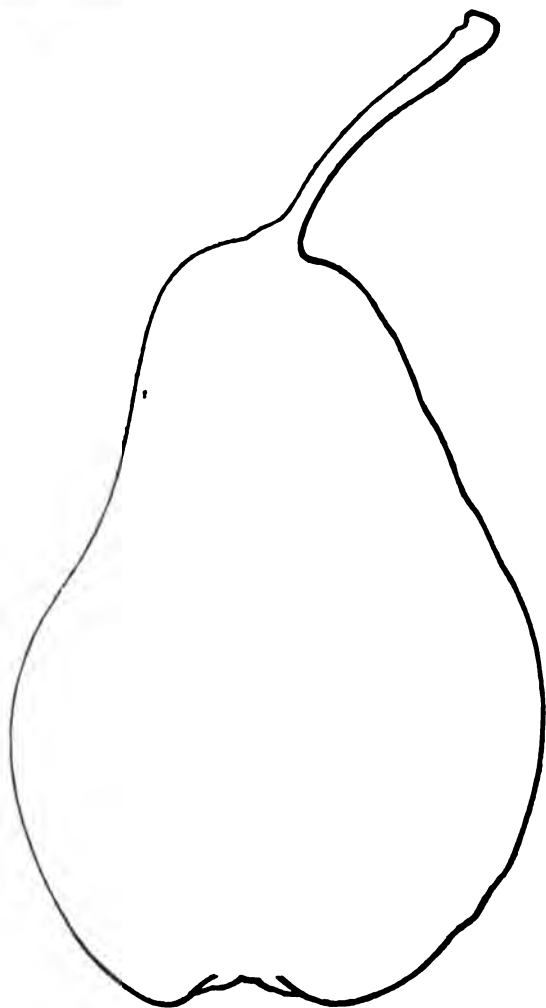


Fig. 18. Excellentissima Pear.

kinds which have been produced. As an evidence of this, we need only remark that the Doyenné Boussock, recently described and figured by us, (Vol. XIII, p. 68,) and the Ex-

cellentissima, which we now have under notice, are both pears which had no noted reputation abroad, and indeed had never been mentioned in any pomological work, to our knowledge, until Mr. Kenrick briefly described them. They have, however, proved to be two very remarkable varieties which will become universally cultivated.

The Excellentissima, (*fig. 18,*) is one of the largest pears, good specimens measuring six inches in length; it has somewhat the appearance of the Williams's Bon Chrétien, but is larger and more obtuse at both ends. It is an abundant bearer, and the tree grows well upon the quince. The wood is yellowish olive.

It first fruited in this country in our collection, in the fall of 1847, when a small pyramidal tree produced upwards of a dozen pears, the largest of which is here represented in our outline engraving. It ripens at a desirable season, and keeps for a long time.

Size, large, about four and a half inches long, and three inches in diameter: *Form*, oblong pyramidal, narrowing a little to the crown, which is slightly oblique, contracted somewhat on one side, and tapering to the stem: *Skin*, fair, smooth, bright yellow when mature, faintly shaded with blush on the sunny side, and thickly covered with large, conspicuous, light russet specks: *Stem*, long, about one and a half inches in length, rather slender, curved, swollen and slightly fleshy at the base, and obliquely inserted with scarcely any cavity: *Eye*, medium size, open, and little sunk in a small, somewhat uneven basin; segments of the calyx long, pointed, and quite reflexed: *Flesh*, yellowish, fine, buttery, melting, and juicy: *Flavor*, rich, sugary, and delicious, with a fine aroma: *Core*, medium size: *Seeds*, large, very long and pointed. Ripe in November.

105. LAS CANAS.

The Las Canas (*fig. 19,*) is a new pear, which first fruited in the Pomological Garden at Salem, three or four years ago. The scions were received from the collection of M. Emelien de Wael, of Antwerp, a gentleman who visited this country eight or ten years ago, and who was an intimate

friend of Dr. Van Mons. He corresponded with Messrs. Manning and Kenrick, and sent them, in the spring of 1841, scions of several new pears, the names of which are enumerated in Mr. Kenrick's *Orchardist*, (p. 170.)

Mr. Manning has briefly noticed this pear in our volume for 1846, (XII. p. 146,) and he considers it a delicious variety, and a decided acquisition. It has much of the character of

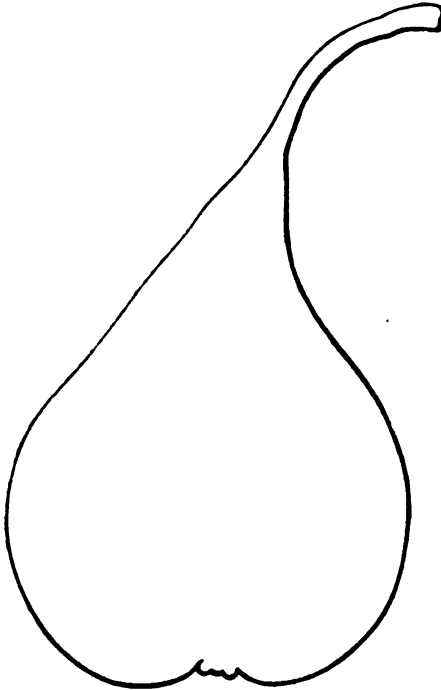


Fig. 19. Las Canas Pear.

the Tyson and Rostiezer. Like those fine pears, it is only a medium-sized fruit, but is of a very regular pear form, tapering into the stem so gradually that it is scarcely possible to say where the fruit begins or ends. The tree grows freely, bears young, and the fruit keeps well. Wood, light yellow, with grayish specks.

Size, medium, about two and a half inches long, and one and three quarters in diameter : *Form*, pyramidal, very reg-

ular, oblique at the crown, and tapering into the stem : *Skin*, slightly rough, dull yellowish green, very much russeted around the eye, extending in patches and tracings towards the stem, mottled with green, and covered with small russet specks : *Stem*, medium length, about three quarters of an inch long, slender, curved, thick at the end attached to the branch, and fleshy at its junction with the fruit, which is oblique : *Eye*, small, open, and inserted in a small, scarcely perceivable basin ; segments of the calyx short, very broad and reflexed : *Flesh*, yellowish white, fine, melting, and very juicy : *Flavor*, rich and saccharine, with a high delicious aroma : *Core*, medium size : *Seeds*, medium size, nearly black. Ripe in October.

106. SAINT DOROTHEE'.

M. Jamin, of Paris, first brought this fine pear (*fig.* 20,) to our notice. In the fall of 1844, when we visited his collection, of which we have given an account, (Vol. XI. p. 205,) we requested him to give us a list of all the varieties that he thought worthy of introduction to American collections, and this was among the number. Our tree fruited in 1847, and we were glad to find it fully equal to the reputation he gave it. Where it originated, or how long it has been in cultivation in foreign collections, we have no information. It has somewhat the appearance of the Marie Louise, and is nearly or quite equal to that delicious pear.

The tree has a very vigorous and healthy growth, with a spreading and upright habit, and it flourishes well upon the quince. Wood, light gray, with very prominent buds.

Size, large, about three and a half inches long, and three inches in diameter : *Form*, oblong pyramidal, full at the crown, swollen on one side, and tapering to an obtuse point at the stem : *Skin*, slightly rough, dull green, becoming yellowish green when mature, considerably traced with russet, faintly browned in the sun, and little dotted with scattered blackish specks : *Stem*, long, about one and a half inches in length, moderately stout, curved and twisted, wrinkled and fleshy at the base, and obliquely inserted in a very shallow cavity : *Eye*, medium size, partially closed, and moderately

sunk in a rather contracted basin, projecting on one side; segments of the calyx short, stiff, and little recurved: *Flesh*,

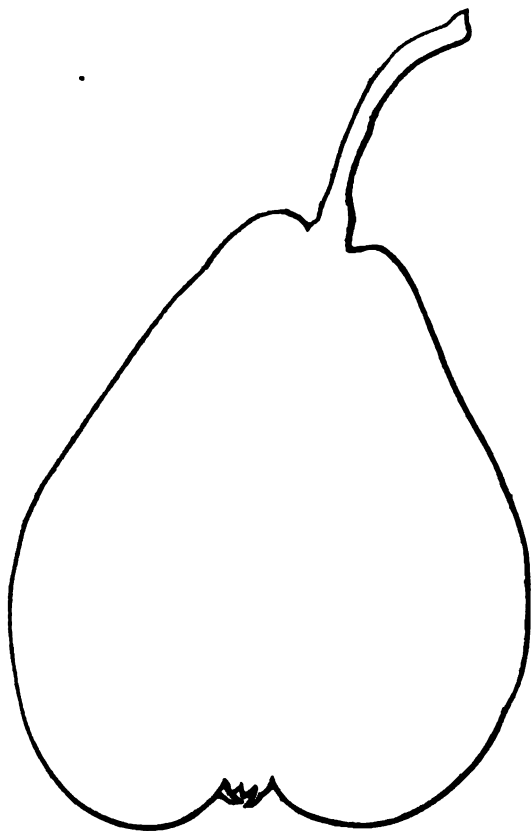


Fig. 20. St. Dorothee Pear.

white, fine, very melting and juicy: *Flavor*, rich, saccharine, and vinous, with a delicious orange-like perfume: *Core*, small: *Seeds*, small, short, and plump. Ripe in October.

107. *JALOUSIE DE FONTENAY VENDEE.* Kenrick's *Am. Orch.*

The fullest account we have of the *Jalousie de Fontenay Vendee*, (*fig. 21*,) is that given by the late Mr. Manning, in our volume for 1842, (VIII. p. 58,) where he states that he

received it from Vilmorin, of Paris. Mr. Kenrick very briefly noticed it in his *Orchardist*, 3d Ed. for 1841, as having been one among several new pears recommended to him as worthy of cultivation by M. Jamin, of Paris; and it proves to be a most excellent variety. Since the notice of it above referred

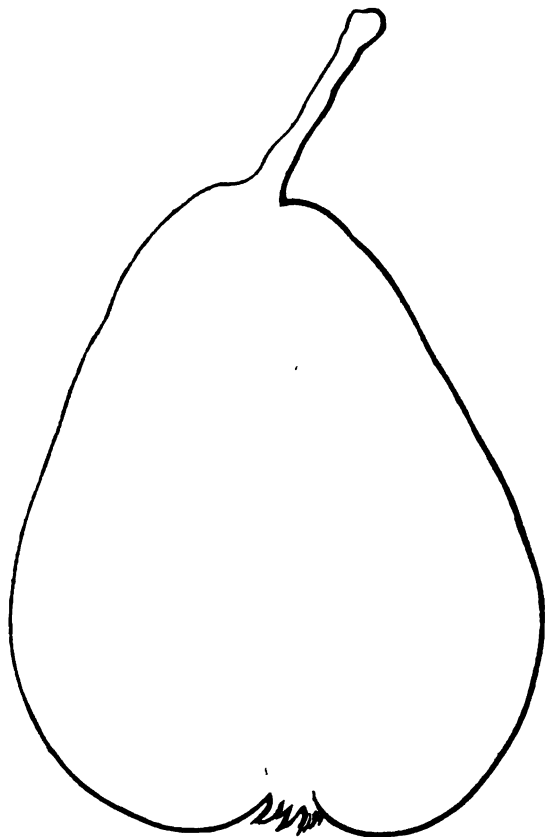


Fig. 21. *Jalousie de Fontenay Vendee Pear.*

to, when it first fruited in this country. in the Pomological Garden, it has been introduced into many collections, and handsome specimens of the fruit have repeatedly been exhibited; the finest of which, that we have seen, came from the Hon. J. S. Cabot, of Salem, and our drawing represents one

of his specimens sent to us in the autumn of 1847. Last season, our own trees produced several pears, and we can fully confirm the high character which the *Jalousie de Fontenay Vendee* has sustained. It bears but little resemblance to the *Jalousie of Duhamel*, as the latter has a dark, crimson-colored, and rough russety covering, while the former has a yellowish green skin, thickly overspread with tracings of greenish russet.

The tree is a vigorous and upright grower, an abundant bearer, and succeeds well upon the quince. The wood is light yellowish brown.

Size, large, about three and a half inches long, and three inches in diameter: *Form*, obtusely pyramidal, regular, broad and full at the crown, tapering to the stem: *Skin*, nearly smooth, dull greenish yellow, much russeted around the eye and stem, and thickly covered, on the sunny side, with rather small russet specks: *Stem*, medium length, about an inch long, rather stout, little fleshy at the base, and obliquely inserted on an obtuse point without any cavity: *Eye*, medium size, partially closed, and little sunk in a rather shallow, large open basin; segments of the calyx broad, short, and roundish: *Flesh*, yellowish, coarse, melting, and juicy: *Flavor*, rich, saccharine, and excellent, with a pleasant perfume: *Core*, rather large: *Seeds*, very large, long, pointed, and dark brown. Ripe in October.

108. **BRANDE'S ST. GERMAIN. Van Mons Arbres Fruitiars.**

Bran de St. Germain, of some foreign collections.

Pyrus Brandesia, Van Mons.

It is somewhat remarkable that a pear, possessing such excellent qualities as the Brande's St. Germain (*fig. 22*,) should not have been more extensively known, and more generally cultivated. Mr. Prince first introduced it to the notice of American cultivators as long ago as 1831, when he gave a descriptive account of it in the *Pomological Manual*, (Vol. II. p. 211,) translated from the *Arbres Fruitiars*, of Van Mons. He there states that the tree was raised from seed about eighteen years previous, and had then produced fruit for thirteen years. Mr. Prince, however, does not state whether he had had the variety in bearing or not.

We first noticed it in 1843, in the collection of Mr. Manning, of Salem, when he exhibited the fruit; but, as the specimens were small, and as they were not then in eating, (September,) we did not particularly examine the variety; and it had quite escaped our attention till the past winter, when several good sized and finely ripened specimens were repeatedly exhibited at the Hall of the Massachusetts Horticultural Society, by the Hon. J. S. Cabot, of Salem, who kindly gave us some of the pears for the purpose of making

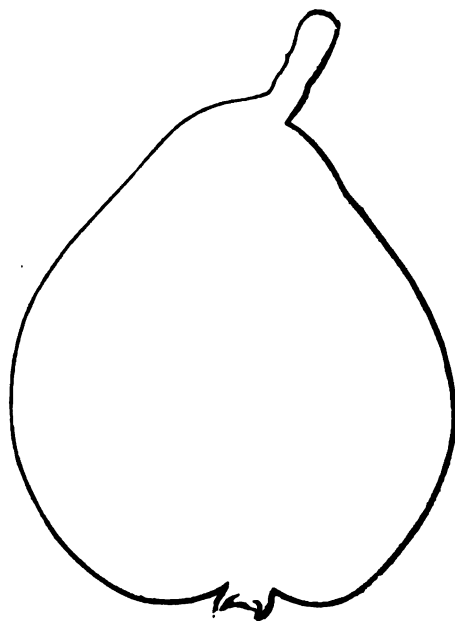


Fig 22. Brande's St. Germain Pear.

a drawing and description. Wishing to know Mr Cabot's opinion of the fruit, we addressed him a note, and the following is his reply:—

“Brande's St. Germain Pear. Some uncertainty exists with regard to the true name of this pear in the *Catalogues* of some of the Belgian nurserymen. It is called Bran or Brau de St. Germain, accompanied with the remark that it is “of uncertain orthography.” It is said to be a seedling of Van Mons. The tree is of vigorous growth and upright habit—

wood rather slender, and, on the lower limbs, somewhat pendulant. The fruit is produced singly, and diffused generally over the tree.

Although it has not been fruited here for a sufficient length of time to justify the expression of a decided opinion upon the subject, yet, from present indications, it will not prove a *very* abundant bearer. The fruit is of medium size and obovate form; color when ripe light yellowish green, with blotches or patches of russet; adheres well to the tree, and not liable to be blown off; flesh white, melting and juicy, of a somewhat peculiar, but very pleasant flavor, not apt to rot at the core; season January and February. Ripening at a season when there are but few varieties of good pears, this is a decidedly valuable acquisition to the garden.

This was first received by me in 1841 or 1842, bearing fruit for the first time in 1844 or 1845, and continuing to produce fruit regularly every year since, may be fairly classed as a first-rate winter pear."

It is only necessary for us to add to this account of Brande's St. Germain, that we presume this variety was added to our collections through the same source as many of our finest new pears, viz., through the kindness of Dr. Van Mons. It was one among the long list of varieties of which scions were sent to Messrs. Kenrick, Manning, and Dearborn in 1835. We fully agree with Mr. Cabot, who has had a much better opportunity of testing it than ourselves, having had the tree constantly in bearing for four years, that it may be "fairly classed as a first-rate winter pear." It has much of the character of the Dix, but it has a *richer* aroma than even that most excellent fruit. It is in fact prolonging the season of the Dix to March, for the Brande's St. Germain comes into eating soon after the Dix is gone. In regard to the proper orthography for the name, there can be but little doubt, as Dr. Van Mons named it in honor of Professor Brandes, of Salzuffin.

Our own description, which is rather more in detail than Mr. Cabot's, is as follows:—

Size, medium, about three inches long and two and a half in diameter: *Form*, obovate pyramidal, largest in the middle, rounding off to the eye, and tapering to the stem: *Skin*, little rough, dull greenish yellow, much traced and dotted with

bright russet all over the surface : *Stem*, rather short, about half an inch in length, moderately stout, and obliquely inserted without any cavity, with a slight projection on one side : *Eye*, medium size, open, and set nearly even with the surface of the crown : segments of the calyx stiff, and slightly reflexed : *Flesh*, yellowish, coarse, melting and juicy : *Flavor*, rich and sugary, with a peculiarly high and delicious aroma : *Core*, small, slightly gritty : *Seeds*, small, slender, and pointed at each end. Ripe from January to March.

ART. II. *On the Management of Peach Trees.* By R. B. LEUCHARS. New Haven, Conn.
(Continued from p. 174.)

THE most proper period of the year, to perform the operation of root-pruning, is undoubtedly immediately on the fall of the leaves. I have root-pruned trees, as late as the beginning of March, successfully; but the months of October and November, experience has taught me, to be decidedly the best time. Choose mild dry weather for the purpose. Proceed by digging out a trench eighteen inches wide, and two feet deep, and two, three, or four feet from the stem; the distance must always be regulated according to the size of the tree, and the nature of its roots; for instance, if the root consists of two or three main limbs, without any small roots or fibres near the stem, then the distance must be greater; in all cases, the small roots and spongelets must be spared. Having dug the required depth, you will be able to see the nature of the horizontal roots, and you may go closer to the stem, if necessary. Cut in right under the mass, severing every root, as you proceed; cut all the ends, near the tree, with a sharp knife that they may the more speedily heal. Let it be borne in mind, that root-pruning does not consist in tearing or hacking the roots off with a spade or pickaxe. The roots of a tree are nothing more nor less than underground branches, as essentially so as those that are growing in the atmospheric medium, and ought to be pruned quite as carefully. If the tree be large, undermine it first on one side, filling up with good fresh loam;

then on the other, cutting through, till you meet the former excavation, filling as before, with loam. Fill up the trench with the same material; put a good strong stick, as a support to it, if necessary, and the work is done.

I would recommend, however, that root-pruning be not too rashly proceeded with. And I will here make a simple remark, which, at a future time, I may advert to more in detail; and this is, that many persons, in attempting to carry out a principle, bungle it in practice, and then fancy that they have a right to give it a wholesale condemnation, merely because they have not been successful. As an instance of this, I called upon a gardener, a few miles from New York, in the month of September last; his peach trees were almost barren; I asked him if he had tried root-pruning? He said he had last spring, but he had killed some of his trees. The fact was, he had lifted some strong growing trees, hacked their roots nearly all off, with an axe, stuck them again in the sand, and there they stood, till they exhausted their stored-up sap. The sun dried them up, root and branch; and they died, of course. What else could they do? It was not surprising that they died, but it *would* have been surprising, if they had lived. I do not bring this forward in defence of a principle: common sense defends it, and, better still, it defends itself. This, however, will show the necessity of caution, for, when intelligent gardeners fall into such blunders, what can be expected from that numerous class, who usurp the name, but know as little of gardening, as they do of the philosopher's stone? Trees of any size or age may, if done judiciously, be root-pruned with advantage, yet, to enjoy the full benefits of the system, they ought to be operated on, from the second or third year of their growth, and continued at intervals of two or three years, if found necessary. I have seen trees, forty years of age, thrown into a bearing state, after many years barrenness. If young trees are regularly root-pruned, it will keep them in a healthy, fruit-bearing condition, and prevent that over-luxuriance, which, no doubt, tends to their decay. They ought to be mulched with some non-conducting material, during summer, which prevents rapid evaporation, by the sun's heat, and obviates considerably the necessity of continual waterings, which, indeed, frequently do more harm than good.

I am aware that a powerful plea will be brought against this system, (allowing all prejudice to be overcome,) in the amount of labor necessary to practise it on an extensive scale. To such objections, I would say, give it a fair trial, before you condemn it. That it fully answers the desired end is unquestionable. That it may be profitably practised upon the extensive orchards of this country, remains to be shown. The system, however, is invaluable to amateurs, and others having small gardens and orchards, as by it a variety of peaches and pears, even the strongest growing sorts, may be grown in a very small garden. A greater quantity of fruit can be produced on a given space of ground, than by any other method, and the trees require, otherwise, very little care. The work requires to be performed at a period of the year, when labor is most plentiful and cheap. And, more than all, trees, so managed, can be removed, at almost any age, from one place to another, without the slightest injury.

If little attention be given to the roots of peach trees, there appears to be still less given to the branches; and, in many cases, where an attempt at pruning is made, it is more injurious than otherwise. The tree should be so trained, in its youth, that the amputation of large branches, in after years, may be unnecessary. The peach is naturally a short-lived tree, and every limb that is cut off after it is full grown, most assuredly hastens its decay. These large amputations are seldom healed over with healthy bark, and besides producing canker. The exudations that frequently follow exhaust the vital energies of the tree more than the heaviest crops. The less cutting that the branches of a peach tree get, the better. It is a well-known fact, that where peach trees have attained to a great age, they have been but little pruned. It is always better to draw out the fire, than to blow off steam, or, in other words, it is better to curtail the supply, than to cut off the branches. Indeed, if we study the philosophy and effects of winter-pruning, and appreciate it according to its merits, it is very probable we would discontinue its practice altogether. Is it reasonable, or right, in principle, to make trees produce three or four times the quantity of wood that is necessary, and then to cut it off, under the fine-sounding professional term of *winter-pruning*? The thing is utterly inconsistent

with theory, with practice, and with common sense. A few moments' reflection would convince any person, that pruning, thinning, shortening, call it what you like, severely practised, with the view of checking the over-luxuriance of healthy trees, can have little better hope of success, than an attempt to lessen the flow of a constant stream, by raising an obstruction in its bed, or shortening its channel, without first stopping the supply. Any ignoramus knows, that such an expedient would only result in a greater evil, and that a current thus temporarily checked, would only flow with the greater violence, the moment it surmounted its temporary obstruction. Just so must a luxuriant tree become more luxuriant, by the severe pruning of the previous winter. Those who assert that severe winter-pruning of the branches will make luxuriant trees productive, and prolong their age, must have learnt very different lessons, from experience, than those which I have acquired. Indeed, I may say that fourteen years' close practice, in their culture, under various circumstances, has taught me quite the reverse. In my father's garden, at Dundee, there grew a peach tree, a few years ago, and very likely is, at the present time, which hardly had a knife upon it for twenty years; in fact it did not require it, it grew so very little, yet scarcely ever failed in bearing a crop, less or more. This tree had only a few square feet of ground to grow in, but a small drain, running into a cesspool, went under it. This drain and cesspool required cleaning, once or twice every year. And the roots which had got into these places, were necessarily cut, every time they were cleaned. Sometimes, this drain got so full of roots, that the water of the sink inside, was stopped back. About twelve years ago, I asked my father how old this tree was, and he said, that he had gathered peaches off of that same tree, when he was a boy; (he was then near sixty years of age;) he said, for the last twenty years, he knew very little difference on it. Some years after this, I tried to bring trees under the same conditions, by root-pruning, and succeeded perfectly. At the same time, with the view of proving the effects of winter-pruning, upon the size and quality of the fruit, I tried the following experiments:—

I chose four trees, growing side by side, (on a south as-

pect,) which had been root-pruned one year before, and had borne a light crop during the previous season, and required little or no pruning. Two of these I subjected to a regular course of disbudding, the whole spring and summer, leaving not a single shoot or twig, that I did not want for next year's crop. Not a knife was put on them, summer or winter. The other two I managed much in the usual way, disbudding them too, but leaving twice or thrice the quantity of wood required. These were subjected to the usual operation of thinning, shortening, &c., pretty severely;—that season all the fruit was picked off, after it had set. The following spring, they flowered *en masse*. Continued the treatment as before; and, after they had set, picked all off except 70 for each tree. After the stoning was over, they were further reduced to the number of 50, upon each. After this period, a difference was perceptible between the two lots of trees. On asking many individuals which were the best, they immediately pronounced in favor of the disbudded trees. Circumstances prevented me from weighing the fruit as accurately as I wished, but I have no hesitation in stating that the aggregate weight of fruit, upon the disbudded trees, was at least $\frac{1}{2}$ more than on the two winter-pruned ones, and in every way superior. Indeed, I have long been of opinion, that severe winter-pruning was a violent infraction of a natural law. In fact, I consider pruning, in any form, as such. It is an exception to a rule, in the economy of vegetable life, which habit and ignorance have nearly converted into a rule itself. And how many thousands are there who think it one? Pruning, at the best, in any shape, is only a kind of indispensable expedient, in assisting nature. And this expedient should be modified and applied in the most advantageous manner, which science, combined with practical experience, can suggest.

Now, as regards summer-pruning, a few words must suffice. This system of pruning has been, of late, much practised and recommended by many eminent cultivators, and, if any difference exists between my method and others, I think it will be simply a question of time and degree. From what I have said in a former part of this article, it will be seen, that I am one of those who hold the opinion that there exists a

relative and correlative influence, between the roots and leaves of plants,—that one part exerts an agency over the other, and that that part is again reciprocally acted upon. Hence, it must be apparent that every shoot that is taken from a tree, while the leaves are in a healthy green state, is just taking the most effectual means of checking the energies of the root; but if the root, at that time, be in a state of powerful absorption, a reaction must necessarily follow. The descending fluids will mingle with the excess that is absorbed by the roots, and will ramify, with redoubled energy, through the branches, and a second growth, stronger than the first, is the consequence. If the absorptive power of the root be very weak, the fruit will drop off, and the tree will receive a check, from which it will not recover during the season. It is doubtful whether the gross feeding roots of luxuriant trees, thus checked, do not gain more strength by the reaction, than if the shoots had remained on until the leaves had lost their power of elaboration. Hence, I argue, that it is very questionable, whether, after making due allowance for the temporary cessation of reciprocal action, by a periodical system of severe summer-pruning, there is not a greater quantity of highly refined juices, assimilated in the branches for the deposition of cambium, the formation of buds, and the production of fruit, by allowing the sap-elaborating processes to go on without any violent interruption, until the assimilative power of the leaves had ceased. This, at all events, I have proved to my own satisfaction, and to others besides. Hence, I conclude, that the absurd system of letting peach trees grow on until midsummer, and then all at once dismantling them wholesale of half their foliage, is founded upon theoretical and practical ighorance, although it is of common occurrence, and even recommended by some high authorities. Let any person just study its effect upon the trees, after the operation, and they will need no further arguments to convince them of its injurious consequences. But then the light and air must get to the fruit, some will say. Very true. And why let them obstruct the light and air at all? What is to prevent the sun, and light, and air, from penetrating into the centre of the tree, from the beginning of spring? Nothing at all, except to give double the work at midsummer. Midsummer

pruning reminds me of a maniac, that allowed his garden to grow full of thistles, that he might have the pleasure of cutting their heads off; and, upon the whole, there appears to me to be as much wisdom in the one as the other. Summer pruning should take the form of disbudding, and ought to commence as soon as the shoots are two or three inches long. At that time, the elaborative powers of the leaves are weak, and, if carried on gradually, as the buds elongate, the roots will not feel the effects of it, while their energies will not be expended in making superfluous shoots, but in swelling the fruit, and forming flower buds on the shoots that remain. Every shoot that is misplaced, or not wanted for next year, ought to be rubbed off before it gains strength; by this method no more winter-pruning will be necessary than merely the topping or shortening of the terminal shoots, and thus very little of the stored-up sap will be taken away.

It is probable that, notwithstanding root-pruning be practised, the trees will occasionally start into second growth. But if the shoots are pinched within an inch or two of their base, they will be converted into fruit spurs for the following season. They will rarely take a third start, at least if they are not subjected to extraordinary excitement, and even then, pinching is still the best recourse. Now this continual pinching may appear a very troublesome business. In reality, however, it is quite the reverse. With regard to time, it is by far the most profitable mode that can be adopted, and when once the amateur and gardener are fully acquainted with the system, they will find it less a business of labor, than amusement. To those who take an interest in their own trees, it affords a continual source of the most pleasurable employment. In walking round their gardens, they will perceive, at a single glance, those that require rubbing off. And an hour or two in the evening—now and then—will be sufficient to go over a considerable number of trees.

I find, Mr. Editor, that I have extended this article to an unpardonable length, much longer than I intended at the outset, but the importance of the subject must plead my apology. Indeed, I could not, with any thing like justice, have compressed it into less space. I do not pretend to have elicited any thing strikingly new or novel, either in theory or in prac-

tice, although I believe the system here recommended is but little practised in this country. I might say much more on the European cultivation of this delicious fruit, but I have said enough for my present purpose. And notwithstanding all that has been written about fruit trees, of late, there may still much more be said, without exhausting the subject. In fact, there is yet much to be done before the climax of attainment can be reached. I hope these remarks will tend to draw the attention of horticulturists further to the subject, and induce cultivators of fruit trees, who have hitherto been unsuccessful, to practise and study the merits of the system for themselves.

New Haven, March 14th, 1849.

ART. III. *The Hoo-Sung, or Oo-Sung, from Shanghai—Its Cultivation, &c.* By H. WENDELL, M. D., Albany, New York.

DEAR SIR,—In your last, I noticed an allusion to the new vegetable esculent, received from China by the London Horticultural Society, through their collector, Mr. Fortune, in 1847, and a request that I would give some account of it.

Seeds of the Hoo-Sung, together with others, were kindly sent me in the spring of 1848, by Doctor Lindley, secretary of the London Horticultural Society, with directions to sow them in a cool frame, either in April or May, or continuously (for a succession) at intervals, during May, and to transplant into the open ground, as we do lettuces. After fear of frosts had subsided, I followed the directions, sowed the seeds in April, and succeeded in raising the plants, which were fit for use early in June. They grew from a foot and an half, to about two feet in height, erect, with oblong, tapering leaves, which, together with the stems, were of a light green color; the flowers were as described in your Journal, small, yellow, in panicles, slightly drooping, — the seeds were ripe in August.

The succulent stem is the part used; it is to be divested of its outer rind, and either simply boiled, with a little salt in the

water, and dressed, as is asparagus, or stewed in soy, with salt, pepper, and butter added, or boiled in soup, as is Okra. It is a very agreeable and pleasant addition to the list of vegetable esculents, and worthy of trial. I have distributed the seeds pretty generally among my friends in different parts of the country, and with pleasure enclose you a few for trial. I would suggest that you allow a few of the earliest plants to mature their seeds, and that, when setting out the plants, you place them in rows, about a foot and an half apart, and the same distance apart in the rows.

Albany, April 10, 1849.

The above communication was accompanied with a few seeds of the Hoo-Sung, for which Dr. Wendell will receive our thanks. We shall give this new vegetable a trial and report upon it another year.—*Ed.*

ART. IV. *Glandular and Glandless Leaved Peach Trees.*

By N. GOODSSELL, Rochester, N. Y.

THE subject of glandular and glandless leaved peach trees was introduced before the Pomological Convention, at Buffalo, by William R. Prince, of Flushing, New York, but, from the press of business before that meeting, the subject was not sufficiently discussed to make it intelligible to all the readers of that report, which was published, of their proceedings.

During that discussion, Mr. Prince said, "serrated, or glandless leaves of the peach, are, therefore, more or less diseased, and consequently less desirable, and of much less value than those of a contrary character, and will, in time, be exploded from our gardens."

From the above and some preceding remarks, as reported, some might suppose that Mr. Prince wished to convey the idea, that the stunted, sickly appearance of peach trees, with glandless leaves, was owing to an inherent, or constitutional disease in such trees from their earliest vegetation. I do not think that Mr. Prince intended to be so understood; if he did, I think it would be difficult to defend his position.

That the character of the future plant is early determined, even from the time of the impregnation of the flower, from which the seed is produced, I believe is now conceded by our best vegetable physiologists. That the constitutional character thus formed, may be impaired by disease, at any time during the life of the plant, is self-evident; but diseases thus produced, and those that are constitutional, should be considered separately.

That those varieties of the peach, whose leaf stalks are destitute of glands, are more subject to what is termed *blight*, or *mildew*, on the young shoots, in the after part of summer, has long been noticed; but as this mildew does not make its annual appearance upon the peach tree until after the young fruit is formed, and its character, so far as the young plant to be produced from the seed, is determined, we cannot conceive how this mildew, which is nothing more than a fungus plant, uncongenial in its growth, by circumstances attending its locality, can have any thing to do with forming a constitutional disease, and should therefore be considered as an accidental injury, which, although it retards the growth of the young shoots, after it fixes upon the tree, does not appear to injure the wood formed before the mildew makes its appearance. Trees of this description, although they do not extend their branches quite as rapidly as those having glands, are often as long-lived, and as productive, — and there is, at this time, within sight of where I am writing this, a tree, the leaves of which have no glands, and the ends of the shoots are each year covered with mildew; yet it has the appearance of a healthy tree, although it is more than forty years old. In some of the oldest fruit gardens in this vicinity, I find trees of the Early Ann, Sweet Water, and Royal George, all serrated varieties, and mildew badly; yet they prove as long-lived as any glandular varieties.

There are some serious objections, however, to many of the serrated varieties, as the New Early Purple, and the Early Tillotson, as on these varieties the mildew extends to the fruit covering the skin with unsightly spots, and causing it to rot prematurely upon the tree.

With the variety of peaches now under cultivation, there is little difficulty in selecting a succession of kinds for the

season, with the exception of the Early Ann, which are not injured by this fungus, and, although the fruit is too delicate for a market fruit, yet should be in every private collection.

I am not aware, that any preventive of the mildew has been discovered, which is applicable to common culture, and, therefore, it is desirable to avoid the culture of all the serrated varieties for which substitutes can be found.

Rochester, N. Y., March, 1849.

ART. V. *On the Cultivation of Cape Heaths.* By W. S. LEACH, Gardener to S. Rucker, Esq., Wandsworth, Surrey, England. *With Remarks.* By the Editor.

THE heath, though acknowledged to be among the most beautiful and attractive of greenhouse plants, is rarely seen except in the collection of some ardent amateur cultivator: and even there it is rare to find a well grown, healthy, and fine-shaped specimen. There seems to be such a general impression that it is next to impossible to raise the plants in any degree of perfection that, at the outset, those who have them make no effort to keep them in health and vigor. That they are more difficult to manage than some plants is true. But their culture, once understood, is as facile as that of a majority of greenhouse plants. The character of their native climate,—the nature of the soil in which they thrive,—their habit of growth,—and their season of flowering once known, there is nothing to prevent the amateur from possessing the finest specimens of this exquisite tribe.

Several excellent original articles have appeared in our previous volumes, both by professional and amateur cultivators, and the information which they have imparted, we doubt not, has been of great value, for the heath is now seen in much greater perfection than formerly. The capital paper by Mr. Towne, (Vol. V. p. 376,) was probably as full and minute in its details as any that could be written; and all who appreciate the heath will consult it and be aided by his advice. But, as we wish to place the opinions of all *good* cultivators before our readers, we are pleased in being able to do

so in the following paper by one of the most successful cultivators near London, which we copy from the *Gardeners' Chronicle* of a late date. The season is now at hand when the plants should be removed from their winter quarters, and Mr. Leach's remarks will consequently be read with greater interest.—*Ed.*

In the following statement, I shall endeavor to give the best method of cultivating these delightful plants, which no greenhouse should be without, for even in a very limited collection one or other may be had in flower the whole year round. Many are of opinion, that heaths will not thrive, intermixed with other plants; but this is a mistake: I know, from experience, that heaths will thrive as well in a greenhouse among other plants, as they would do in a heathery; in fact, some of the woolly-leaved kinds are the better for being kept a trifle closer than others; such are *ferruginea*, *gemmaefera* major, *splendens*, *Massoni*, *Templeæ*, and others. I have, at present, specimens of *ferruginea*, *ampullacea*, *Parmentieri rosea*, and others, mixed with *pelargoniums*, *fuchsias*, *azaleas*, and other greenhouse stock, doing much better than I ever saw them do in the heathery, where air was more freely admitted. They, however, should be placed at the coolest end of the greenhouse.

The soil which I have found Cape heaths to thrive best in, (and I have tried several soils,) is a mixture of Wimbledon peat, and a much lighter kind of peat, from Croydon; when I cannot get the last-mentioned peat, I find well-decomposed leaf-mould to be an excellent substitute. Wimbledon peat, two parts; lighter peat, or leaf-mould, one; and one part of silver-sand, is what I use: if silver sand cannot be obtained, coarse river sand will answer: the whole should be well knocked to pieces, and run through a $1\frac{1}{2}$ inch meshed sieve. I use the soil fresh from the common, where it is dug two inches deep, paring off the subsoil and the rough top. For shifting, any time from the beginning of February to the latter end of August will do. I have shifted them even as late as the beginning of October, and have found them to do equally well with those shifted earlier. This, however, is only mentioned to show, that no danger is to be apprehended from late shifting, in cases where such is found to be necessary.

I use plenty of drainage in all cases, especially for large plants, this being a *sine qua non* in heath culture. For the largest second and third sized pots, I use from three to four inches of clean drainage. In shifting, place the "collar" of the plant a little above the fresh soil, in order that no water may lodge round that part: I never touch the old ball, except to rub off a little of the surface soil, and to remove such of the crocks as do not interfere with the roots. After putting the crocks in the fresh pot, I place a layer of coarse siftings over them, and then I fill up to the required height with the above-mentioned compost, pressing it firmly with the hand as I proceed. The ball being placed as near the centre of the pot as possible, I then fill up with the compost, pressing it in firmly all round with my hands, for it is a bad practice to use a stick for this purpose; the latter injures the young fibres. I fill up to within an inch of the rim of the pot, for small plants, and two or three inches, for larger plants, smoothing down the surface, so as to cause it to slope gently to the side of the pot; this being done, I give the plant a good soaking with soft water, in order to wet the ball through, and then I place it in some shady situation (if shifted in summer) for a few days, being careful not to over-water it. Indeed, heaths require little water after shifting until they push fresh roots, when they may be more fully exposed.

All the free growing kinds of Cape heaths succeed best out of doors, in a not over-shaded place during summer; the slow growing sorts, as *Massoni*, *Templeæ*, *pulcherrima*, *ferruginea*, *mutabilis*, *metulæflora*, the *tricolor* varieties, &c., are best kept in the house, or in pits, always, however, bearing in mind, that the heath tribe requires plenty of air and little shade, except when fresh shifted. Should the ball prove dry when taken out of the pot in shifting, the best plan is, to place it in a vessel of water until it is soaked through, being careful to let the water drain thoroughly off, before placing it in its fresh quarters. I always give a liberal shift, if the plants are well rooted, say, from an eight-inch pot to a twelve or thirteen-inch pot, according to the nature of the variety. I prefer the "West Kent Pot" for heath culture, for its bottom being movable, there is no occasion to break the pot in shifting, which is unavoidable when the common pot is employed.

As soon as the plants are shifted, it is a good plan to peg down some of the lowermost branches, in order to hide as much of the soil as possible, and to keep the plant bushy. In hot and dry weather, I take a watering-pot, with a coarse rose, and well water the ground between the pots, a practice which I find to be better than wetting the plants overhead, which is apt to induce mildew, and, what is still worse, it causes the plants to lose all their inner foliage.

For mildew, the remedy experience has taught me to be the best, is, to dust the parts affected with sulphur, and to place the plants in a dry airy situation. The sulphur may remain one, two, or three days; it may then be brushed or blown off. When large specimens have done blooming, I take a pair of shears and clip them all over. The free growing sorts are then placed out of doors to make their growth and set their bloom; the slow growers are kept in doors, and are given plenty of air night and day. In housing the plants in autumn, they should never be allowed to touch one another, and, if possible, they should be elevated on pots or blocks, so that there may be a free ventilation of air among them.

Heaths require little water in winter; I make it a practice to rap the side of the pot, and, if it sounds hollow, I give water, carefully, however; for to give much water to such varieties as *aristata*, *Hartnelli*, *Massoni*, &c., would be sudden death to them; but, on the other hand, *perspicua nana*, *Westphalingia*, the *ventricosas*, &c., require it often, always giving enough at each watering to soak the whole mass of soil. I water early in the morning in winter, in order that the house may get dry before night. If the weather prove dull and cloudy, (which it often does at this season,) I fire gently during the day time, giving air, at the same time, at back and front. I, however, allow the pipes to cool before I close the house; for nothing is more injurious to heaths, or, indeed, any other plant, than a high night temperature. I never fire at night, unless there are 12° or 14° of frost; 8° or 9° of frost will not injure Cape heaths, if the wood has been properly ripened in autumn. I have frequently had heaths frozen so hard that a knife would not penetrate the soil, and they have not received the least injury therefrom. Damp will do more mischief among heaths than frost. By

following the above rules, I am satisfied that heaths may be grown from cuttings large enough for any exhibition, in less than three years.

The following varieties of Cape heath will keep a small heathery or greenhouse, gay throughout the whole year:—

Name.	Time of Flowering.	Name.	Time of Flowering.
Mutabilis, . . .	All the Year.	Ventricosa Bothwelliana, . . .	} .. July.
M'Nabiana, . . .	February.	Tricolor major, . . .	
Trossula, . . .	} March.	Parmentieri rosea, . . .	
Vernix, coccinea, . . .		Jasminiflora alba, . . .	} August.
Neilii, . . .	} .. April.	Pulcherrima, . . .	
M'Nabiana, rosea, . . .		Tricolor coronata, . . .	
Intermedia, . . .	} ... May.	Mammosa rubra, . . .	} .. Sept.
Cavendishii, . . .		Bowieana, . . .	
Ventricosa alba, . . .		Clewsiana, . . .	
Perspicua nana, . . .		Lamberti, . . .	} Oct. Nov. and Dec.
Ventricosa hirsuta, . . .	} .. June.	" rosea, . . .	
Tricolor, . . .			
" Wilsonii, . . .			

The following are fifty of the best varieties:—Mundula, physodes, splendens, Massoni, Easonii (Jackson's), taxifolia, aristata major, inflata rubra, Bandonii, Aitoni turgida, Devoniana, Dulcinea; propendens tubiflora, ventricosa grandiflora, fasciculata superb, Jacksonii, retorta major; vestita rosea, alba, coccinea; Templæa, princeps carnea, obbata (Pamplin), obbata (Veitch), tricolor Dunbariana, metulæflora, m. bicolor, Parmentieri rosea, ampullacea major, a. rubra, glauca, elegans, Sprengelii, tortiliflora, Hartnelli virens, ferruginea, Vernonii, gemmifera major, Savileana, togata, rubella, odorata, Lawrenceana, Swainsonii inflata, Julyana, delecta, aristata vittata, pulcherrima, tricolor Wilsonii, t. M'Nabiana.

ART. V. *Floricultural and Botanical Notices of New and Beautiful Plants figured in Foreign Periodicals; with Descriptions of those recently introduced to, or originated in American Gardens.*

Anemone Japonica, hardy.—We are gratified to state, that the beautiful new anemone from Japan, of which we have given

an account, is quite hardy, and may now be cultivated among our hardy perennial plants. The past severe winter several roots were left in the border without the least protection, and they are all alive, and now beginning to grow.

Maurándya Barclayàna álba.—This beautiful variety of the Maurandza is one of the most delicate climbing plants; producing a profusion of its pure white, bell shaped blossoms, which contrast prettily with the delicate foliage and slender habit of the plant. Turned out into the border, or cultivated in a pot, and trained over a balloon trellis, it is one of the most desirable plants for a small collection.

New Phloxes.—Every year brings an accession to the list of beautiful varieties of the phlox; the French and Belgian cultivators seem to be the most successful growers. The following new ones we have recently added to our collection:—Arsinoe, Beppo, Invincible, Triton, Thésé, Decamp, Duchesse de Nemours, Rosetta, Reine de Jour, Robert de Flandres, Camille, &c. Among these the most remarkable one is the

P. triumphator.—It was among a lot of thirty thousand seedlings raised by M. Rodigas, of St. Trond, Belgium; and the amateur may, from this, form some idea of the uncertainty of producing new and distinct seedling varieties. The flowers are produced in a spike in the style of Van Houttei: but they are larger, and of a pure white, striped, and feathered with deep amaranth. It grows from three to four feet high, and is in bloom during July and August. M. Rodigas is one of the greatest cultivators of the phlox in Europe, and several of the above are his seedlings.

Seedling Ixias.—Our correspondent, R. C. Woods, Esq., of Wheeling, Virginia, a zealous amateur and cultivator of flowers, informs us he has raised "some fine seedling Ixias, some of which bloomed last spring, and several will be in bloom in a few days. Of the former, three are distinct and superb varieties; one a fine rose, considerably larger than the blooms of that class, and of fine form; plant and foliage resembles *I. squálida*, but throws up a strong flower stem, crowned with a large mass of beautiful rose-colored flowers. This is certainly the best *Ixia* I have ever seen; it is a seedling of *I. squálida*, impregnated with *I. tricolor* (or may be *Sparáxis tricolor*.) The others, that have flowered, are from seed of the

latter, impregnated with the former, one of which has the ground color of the petals a clear yellow, tipped about one third with royal purple, the lower part of which, on the edges where it rounds off, the yellow assumes a deep lake color, blended with fine pencillings on the yellow, gradually shaded off to a pale purple at the points of the petals; the foliage and habit of the plant resemble the parent, but one third larger; the other, in flower and foliage, resembles the parent plant, but has a clear deep purple stripe through the centre of each petal."—*R. C. W., March, 1849.*

Seedling Cacti.—Mr. Woods has also raised some fine seedling cactuses, particularly one from *Cereus speciosissimus*; flower large, and fine form; color clear and distinct, with a slight tinge of the purple peculiar to the parent plant. Also a seedling from *Epiphyllum truncatum*, which he thinks, in color and form of flower, is decidedly superior to any of that tribe of plants. We are glad to record such improvements in the production of seedlings, as it not only shows the interest which is manifested in their production, but the decided results which may be accomplished by following up the growth of seedling varieties.—*Ed.*

Cereus crenatus.—This splendid new species of the cereus, with white flowers, as large as *speciosissimus*, and of the same form, will probably bloom in our collection the last of May. The plants have several buds, and, if no accident occurs to them, an opportunity will be afforded to see this beautiful species, of which a brief description has been given in our volume for 1844, (X. p. 418.)—*Ed.*

104. *CA'NTUA PYRIFOLIA* Juss. Pear-leaved Cantua. (*Polemoniaceæ.*) Peru.

A greenhouse plant; growing three feet high; with yellow and white flowers; appearing in spring; increased by cuttings; cultivated in loam, leaf-mould and sand. *Flore des Serres*, pl. 383. 1848.

A beautiful species of the *Cantua* from Peru, so different from the common garden variety *C. coronifolia* (now *Ipomopsis*) as scarcely to be recognized as belonging to the same family. It was first discovered by Humboldt and Bonpland, but its introduction to Europe in a living state is due to Mr. Lobb, who sent it from Peru. It forms a branching plant, with ovate leaves, and the flowers are produced in large terminal corymbs,

the stamens extending twice the length of the corolla; calyx green and crimson, forming a rich contrast with the flowers. (*Flore des Serres*, August.)

105. MITRA'RIA COCCI'NEA Cav. Scarlet-flowered Mitraria.
(*Gesneracæ.*) Chili.

A greenhouse shrub; growing four feet high; with orange scarlet flowers; appearing in spring; increased by cuttings; grown in leaf-mould, peat and sand. *Flore des Serres*, pl. 393. 1848.

Another of Mr. Lobb's acquisitions in Chili. This *Mitraria* forms a kind of half climbing shrub, with small ovate lanceolate leaves, and from the axils of all the leaves depend numerous large, tubular, orange scarlet flowers, borne on peduncles two inches long. "For the abundance of its blossoms, and the brilliancy of its flowers, it deserves a place among the most beautiful of greenhouse plants." It appears to be between *Columnnea* and an *Æschynanthus*, but more splendid than either. The treatment is the same as that for the *gesneras*, or *Æschynanthus*. (*Flores de Serres*, August.)

106. TROPÆ'OLUM SMIT'HI D. C. Mr. Smith's Nasturtium.
(*Tropæoleacæ.*) S. America.

An annual climber; growing four feet high; with red flowers; appearing all summer; increased by seeds and cuttings; grown in light rich soil. *Flore des Serres*, pl. 394. 1848.

A new and elegant species of the *Nasturtium*, with small, neat foliage, and deep red flowers, the petals of which are beautifully fringed. It is another of the discoveries of Mr. Lobb, who found it nine thousand feet above the level of the sea. It may be cultivated as an annual. (*Flore des Serres*, August.)

107. DRYMO'NIA CRISTA'TA Miq. Crested-calyxed Drymonia.
(*Gesneracæ.*) Guinea.

A stove plant; growing two feet high; with white flowers; appearing in summer; increased by cuttings; grown in leaf mould, peat, and sand. *Flore des Serres*, 1849, pl. 395.

A very singular and interesting species of the *Drymonia*, with white flowers, the calyx of which has a crested appearance, from whence its name. The foliage is similar to that of a *Gésnera*, and the blossoms appear at the axils of the leaves. It is an interesting addition to our summer flowering greenhouse plants. The culture is the same as that for *gesneras*. (*Flore des Serres*, Sept.)

REVIEWS.

ART. I. *The American Fruit Book ; containing Directions for raising, propagating, and managing Fruit Trees, Shrubs and Plants ; with a Description of the best varieties of Fruit, including new and valuable kinds ; embellished and illustrated with numerous Engravings of Fruits, &c.* By S. W. COLE, Editor of the New England Farmer, &c. 1 vol. 12mo. pp. 288. Boston. 1849.

AFTER so full and explanatory a title, we need scarcely mention that this little manual, by Mr. Cole, is a very useful aid in the spread of more information upon the cultivation of Fruits and Fruit Trees. The author is well known as editor of several agricultural papers, and as having, in that capacity, a wide acquaintance and extensive correspondence with various fruit-growers. "These advantages," as he informs us in the preface, "with diligence and zeal in turning them to account, with our own practice from early life, in the pleasant pursuit of growing fruits, and in raising and managing trees in the nursery and orchard, may justify us in offering this work as the result of long experience and extensive observation, combined with the opinions of a great many of the most intelligent fruit-growers and able pomologists in the country."

Every work which conveys information on the culture of fruit, be it ever so small, we hail as an important aid in the dissemination of a taste for good fruit ; and when, as in the present instance, this information is furnished at the cheapest rate, it must be highly beneficial in opening the way, where more expensive and scientific works would not be read. Mr. Cole has, therefore, in his compact volume, done a good service, and though "of humble pretensions, both in size and price," it will not be the less welcome.

The volume commences with a treatise on the culture of fruit trees generally, viz., Soil,—Situation,—Propagation by budding, Grafting, &c.,—Manures—Transplanting—Pruning—Training—Effects of Climate—Dwarfing—Insects, &c.

The remainder, and by far the greater part of the work, is devoted to a brief description of the various fruits, with out-

line engravings of many of the more important and valuable kinds. The volume comprises two hundred and eighty-eight pages of small type—handsomely printed, and forming a neat addition to every farmer's library.

ART. II. *A Practical Treatise on the Management of Fruit Trees; with Descriptive Lists of the Most Valuable Fruits for General Cultivation, adapted to the Interior of New England.* By GEORGE JACQUES. 1 vol. 12mo. pp. 256. Worcester. 1849.

HERE we have a treatise purely local, being adapted to the interior of New England. "Having waited" says Mr. Jacques, "a long while, in the hope that some one, better qualified for the work, might be induced to furnish the fruit cultivators of interior New England with a treatise such as their *local* wants demand, I have at length ventured upon the undertaking myself. * * * *

"If there are pears which ripen freely at Salem, but will not succeed at Boston; if the climate of western New York, and the shores of the Hudson differ so widely, as to affect the quality of several varieties of different species of fruits, one might infer—what it has cost the writer something to learn—that whoever would succeed with fruit trees, in the hill country of the Eastern States, may rely with tolerable safety upon the uncertain testimony of his own neighborhood, while the profoundest wisdom that has ever recorded the experience of other countries would only mislead and bewilder."

This is all very true, and Mr. Jacques has succeeded well in his undertaking, and proved himself well qualified for the task. The cultivators of New England will be especially indebted to him, and we have no doubt his work will be the means of enabling the possessors of the hilly and colder sections of our own New England to select such varieties as will give them an abundance of the choicest fruits.

We have always contended that it was utterly useless to allow ourselves to be guided by the opinions of cultivators in the warmer portions of New York and the Middle States—

just so long as we do so will disappointment follow our efforts. There is a greater difference in the climate than the degrees of latitude and longitude would naturally lead us to imagine—and, sooner or later, this fact will be learned—to the interest of all.

MISCELLANEOUS INTELLIGENCE.

ART. I. *General Notices.*

Transplanting Budded Roses.—It is well known to all rose-growers, that those varieties which are budded or grafted on briars are apt to degenerate unless removed every three or four years. In my own experience, this has especially been the case with the hybrid perpetuals, many of which have become more sickly every year, and some have died off, although, when planted, they were vigorous and healthy. The causes of this are probably numerous, arising from the unnatural, or, more properly, artificial union of the stock and the graft, and the little attention generally paid to congeniality of habit when performing the operation. But, as far as the evil admits of correction by transplanting, the cause appears to lie in the soil or the state of the root; and, when taking up a large number last week, I particularly observed the condition of that organ, and its relation to the state of the tree. I found, in most cases, that the unhealthy subjects had very few root fibres, but, in the place of them, a mass of wood, often in a rotten state, fully accounting for disease in the tree. It was evident that, in my case, the briars had been improperly prepared in the first instance, old stools having been used, with no root fibres, and incapable of producing any. Where this was not the case, the rough mode of digging them from their native hedges had left fractures and wounds, accounting for a want of health. The mode of procuring briars, as often practised, thus becomes the source of injury to the budded head in future years, and cannot be too much reprehended. Men are engaged to get them at so much per hundred, and they are hacked up in the roughest manner. To have briars in a proper state for grafting or budding, they should be grown for the purpose, that a young stem may proceed from a root of its own age, and not from one become venerable from twenty summers.

The cause now mentioned, and the necessity for a change of soil, render it desirable to remove budded roses, and I will detail the plan I adopted myself, and am still pursuing. Choose your new situation as remote as convenient from the old one, and well dig the soil to the depth of eighteen inches, incorporating with it a large portion of well rotted manure. I employed night-soil and ashes, which have been mixed for twelve months, but should have preferred the dung of an exhausted cucumber bed; although

I must mention that Mr. Paul recommends the former compost for light soils in preference to the latter. The holes being ready, dig up the rose-trees, taking care not to break the roots, which is very likely to happen if they are not well loosened with the fork. Prune the head close in, and cut away all dead parts about the juncture of the stock and the bud. Then prune the roots, leaving as much as possible of the young fibres; cut away all useless and decayed portions, and see that no rough wounds remain. As each tree is finished, let it be put in its new situation, allowing the roots to be exposed to the air as little as possible. Arrange the fibres nicely on the surface of fine soil, and cover with the same; tread the whole firmly in, and give a good watering. This must be repeated occasionally in dry weather the first season, and, with this care, the trees will not suffer by removal. The pruning of the roots, and the new soil, will excite to the production of fresh fibres, and the results of your operations will appear in finer flowers and a more vigorous growth.

Although budded roses suffer most by continuing too long in one locality, all kinds will be improved by occasional removal. Let a few be done every year, and the whole collection will be kept in high condition. The flowering will be retarded by the process, but this will be an advantage, by prolonging the blooming season. It should have been mentioned that, when examining the roots of the briars, all those parts of the buried stem which have thrown up suckers should be cut away, to prevent that nuisance in future. If you intend to bud roses yourself, choose proper stocks, avoiding all those club-footed things which are so plentifully found in hedges.—(*Gard. Chron.*, 1849, p. 181.)

Weigelia rosea.—Although this is perfectly hardy, it deserves notice as a pot plant for window or balcony gardening, and it also answers admirably for forcing. For the latter purpose, any time during February, March, or April, select strong plants in 3-inch pots, and shift them into 6 or 8-inch pots, using turfy loam, a little leaf-mould, and some sand. Let them be plunged in an open situation fully exposed to the sun. They will require some little summer-pruning, or rather pinching, in order to make them bushy. By autumn, they will be nice dwarf plants, and may be removed to the forcing pit, cool part of the stove, or warm greenhouse, taking care not to prune them. Few plants present a more graceful appearance, and require less care.—(*Gard. Chron.*, 1849, p. 181.)

Hint respecting the Culture of Araucaria imbricata.—There was planted in a park in the south of England, in the autumn of 1845, a number of good sized plants of *Araucaria imbricata*, in various soils and situations, all considered more or less good, with one exception. This latter plant was placed in what might be considered a disadvantageous site in all respects; when planted, it was looked upon as certain not to do well, being in a low valley where fogs appear earliest and leave latest, and where the most powerful winds sweep along more destructively than in the exposed places at the foot of a hill facing the north, and shaded by large trees during the whole winter season, and where, six inches below the turf, there is a hard bed of stones; yet this tree looks most luxuriantly, and has made growth in the

proportion of three to one more than any of its contemporaries. There is no doubt that the sweeping winds, the bed of stones, and the entire absence of sun for several months have all proved favorable to it.—(*Gard. Chron.*, 1849, p. 181.)

Culture of Neapolitan Violets.—We extract the following passages from a communication we received a week since from Mr. Allan, of Dumfriesshire, deeming it more than possible that some of our readers might feel interested in the method of their cultivation—the more particularly as the directions given are clear and distinct. The violet is, at all times, a favorite flower for the bouquet, a distinction it richly merits, from its color—the rarest in floriculture—and, still more so, by the delightful fragrance it yields, which, unlike many other perfumes, is agreeable to every one, or, at least, we never knew any party who objected to the scent of violets. We proceed with Mr. Allan's observations:—"Having been very successful, this winter, in growing the Neapolitan violet, I think it only right to make my treatment of it known for the benefit of others. In the spring of 1848, I had the old plants properly dressed, by taking off all the dead leaves, forking up the soil round about the plants. The first week in April, I top-dressed the old plants with fresh soil, to encourage runners. These young shoots will become well rooted little plants about the latter end of May. Having prepared a bed for the plants, by mixing a compost of two parts loam and one of vegetable mould, just colored with fine sand, remembering that the soil requires to be porous, with the usual garden soil, I proceeded to mark my bed in rows, about 16 inches apart, placing the plants at 10 inches distance from each other. I was very particular in lifting the young plants with as compact balls of earth as possible, removing them carefully with a trowel. I then gently watered them with a fine rose watering pot, shading them from intense sun. All they now required was attention to weeding, occasionally running the Dutch hoe among them. In the first week of September, I prepared to pot them in large size 32. I took great care to have the drainage well attended to. The compost with which I filled my pots is three parts sandy loam and one part charcoal. In this I placed one plant in each pot. Having a three light frame ready, placed on four bricks, I put about 10 inches of gravel over the surface of the ground under it, and on this I placed my pots, 10 inches apart. They require careful watering, or they are certain to suffer from the effects of over-watering or stagnation. I gave them air on all occasions, by tilting the lights back and front at night, and drawing them off entirely in the day. I was very particular in removing all decayed leaves every day, stirring the soil in the pots. In November, I endeavored to keep the plants as free from damp as possible, using little or no water in dull weather. About the first week in December, I removed part of my stock into the greenhouse, and placed them on a front shelf, near the glass, where it is warm and airy. By this mode of treatment, I have been able to ensure an abundance of flowers since Christmas, and shall continue to have an excellent supply for the next six weeks to come. I have cut 60 flowers from one pot at a time." We feel assured these few hints will not be lost on many of our

readers who may have adopted this beautiful plant. To such as have not, we say, begin. We think the pleasure of gathering violets of your own cultivation for three or four months consecutively will well repay the trifling trouble required. Many parties who are deprived of more extensive accommodation might ensure a very pretty supply of plants by such simple means as those recommended.—(*Gard. Journ.*, 1849, p. 135.)

Pelargoniums for Exhibition.—Here is another race of Heaven's gifts, which almost defy man's boasted power of speech to describe. Admiration becomes so intense in contemplating their varied beauties, as to strike the most learned prattler dumb, nor is it till the eye becomes, as it were, accustomed to the gorgeous display, that the tongue does its duty in uttering its exclamation of surprise and pleasure, and the pen is made to perform its office in reporting to the world at large of the treasures Flora offers to our acceptance—more bright, more beautiful, than all the dross men would wear away their lives to accumulate in other lands, unblessed by such peaceful, health-giving evidences of our labor at home. Specimens of this tribe of plants now require much attention. Among the first cares, forming them into elegant shapes must be named. To this end, the branches should be strong, erect, of equal growth, and regularly disposed; if any vacancy appears, run a stake into the earth, and attach a branch to it from where they seem thick. This system will improve the general appearance of the plant, and, on the day of exhibition, many of the stakes may be drawn out; the few that are allowed to remain should be neatly arranged, so that the blooms might be viewed without the stakes being included in the exhibition, a matter of taste few persons are found to differ upon—a bundle of sticks being a very good thing in its way, but better in connection with a blazing fire at Christmas than part of an *al fresco* exhibition on a hot day in July. We may be singular in our opinions, but, such as they are, we fearlessly give them, and abide the consequence. Specimen plants require plenty of room, the side branches should not touch each other, a free current of air should be allowed to pass between them, they ought to be kept as near the glass as possible, and turned frequently, so that the whole of the plant may derive a benefit from the sun, light, and air; water them sufficiently to preserve the foliage from drooping, and give plenty of air whenever the weather will admit of it; a little gentle warmth is requisite occasionally, to keep out frost, and absorb damp. (*Gard. Journ.*, 1849, p. 135.)

Campanula carpatica.—This desirable herbaceous plant grows rapidly, and may be readily increased at this season by division; the slips should be planted four inches apart in a bed of rich compost, well drained. In borders, plant in patches, consisting of five plants each. The above mode of culture must be adopted annually, in order to ensure success. My plants quickly cover the bed in which they are planted, producing a mass of blue flowers during the latter part of the summer and the whole of the autumn months. Its height, when in flower, is from one foot to eighteen inches. As seedpods appear, I remove them, in order to give strength to the plant, and to extend its season of blooming. If plants are not obtainable, a little

seed sown now in heat will produce flowering plants next autumn. There is also a white variety of this beautiful hardy plant.—(*Gard. Chron.*, 1849, p. 214.)

Culture of Violets.—In compliance with your request that I should give you my method of growing violets, I beg to state that I am a kitchen gardener and florist, and that I can seldom allow violets to have the undivided occupation of any piece of ground. I plant them in April on a piece of land occupied with some other crop, such as horn carrots, cos lettuce, radishes, &c. ; but the best associate which I have found for them is the Tripoli Onion, between each row of which I plant violets. The check which a crop of this kind gives the violet, provided the onions, &c., are not allowed to remain too long on the ground, benefits the violet.

After the onion crop is taken, I stir the ground between the violets with a hoe, and scatter a little short dung or some kind of manure over them ; this is, however, not a plan which I would recommend. For parties who have not a ready sale for such things, the most advisable plan of culture is, to divide the old roots in April, and plant them six inches asunder, in rows twelve inches apart. In your last year's calendar, planting towards the end of summer is recommended ; but I consider this practice to be quite wrong. Experience has taught me that they succeed best when planted every year. When I allow them to remain two years, I cut the foliage off them with a reaping hook two or three times during the summer, and greatly to their advantage. My seedling, specimens of which I sent you, maintains its good properties ; I found it in a row of seedling Russian violets.—(*Gard. Chron.*, 1849, p. 214.)

Francisea Hopeana.—This charming plant, introduced from Brazil in 1826, has been grown here for a series of years, and I have found it admirably adapted for the embellishment of sitting-rooms during the months of winter and spring. Its flowers are large, powerfully fragrant and attractive, changing from a deep rich purple hue to an almost snowy whiteness ; and, as this peculiar character is maintained for a lengthened period, its value for this description of decoration is considerably enhanced. It forms an excellent centre plant for round or octagon baskets, in which Chinese primulas or hyacinths are the principal objects employed, its pale green foliage relieving the dense masses of flowers such plants usually exhibit. Its cultivation here is an exceedingly simple matter, being grown in a very cool stove, in comparatively small pots, in a mixture of sandy peat and loam, the object in view being to obtain small compact plants, not to exceed two feet in height, in order that they may be readily transferable to vases or baskets, as circumstances may require. So soon as the plants have performed their functions of flowering, the shifting process is performed, using the knife freely alike to root and branches ; all other attention is merely routine, save in the application of an occasional watering of liquid manure.—(*Gard. Chron.*, 1849, p. 214.)

Chinese Winter Flowers.—On visiting some of the flower-shops in Shanghai, in the middle of January, I was surprised to find a great many flowers which had been forced into bloom, and were now exposed for sale. I was

not aware, until I had this view, that the practice of forcing flowers was common in China. Many plants of *Magnolia purpurea* were in full flower, so were many kinds of double-blossomed peaches, the pretty little *Prunus sinensis alba*, and a variety of camellias. But that which struck me as most remarkable was the facility with which the *Pæony Moutan* had been brought into full bloom. Several varieties of this plant were in full flower; and, at this season of the year, when all out of doors was cold and dreary, they had a most lively effect. Their blooms were tied up, to keep them from expanding too rapidly. All these things had been brought from the celebrated city of Soo-chow-foo, the great emporium of Chinese fashion and luxury.

You will perhaps think that the Chinese have glass houses, hot water pipes, Polmaise stoves, and all those fine things which assist gardeners and amateurs in Europe. Nothing of the kind; they do all these things in their houses and sheds, with common charcoal fires, and any quantity of straw to stop up the crevices in the doors and windows.

At this season of the year, the "Kum-quat" (*Citrus japonica*,) which is extensively grown in pots, is literally covered with its small, oval, orange-colored fruit. This, with various other species of the orange, are mixed with the forced flowers, and together produce an excellent effect. I think if the "Kum-quat" was better known at home, it would be highly prized for decorative purposes during the winter months. It is much more hardy than any of its tribe; it produces its flowers and fruit in great abundance, and it would doubtless prove a plant of easy cultivation. To succeed with it, as well as the Chinese, however, one little fact should be kept in view, namely, that all the plants of the orange tribe which fruit in a small state are grafted.—(*Gard. Chron.*, 1849, p. 214.)

Pomological Archæology.—As it is the duty of every one possessing information, however limited its extent may be, to communicate it for the benefit of his fellows, I take advantage of the opportunity afforded in your Journal, of making the following remarks. I have headed this article "Pomological Archæology," because it treats of the pomology of an age long prior to our own, and of which but little is now known.

"It is much to be regretted that Mayster Groshede, somtyme Bysehoph of Lyncoln," "Barnaby Googe, Esquire," "Leonarde Mascall," and those of our ancestors who had the ability and the opportunity of writing on rural affairs, did not devote their attention to what was immediately passing around them, instead of occupying their minds with translations from Cato, Columella, and Varro, and promoting the absurdities contained in these authors; the consequence of which is, that we are left in comparative ignorance of this part of our social history.

It has been said that the apple was introduced to this country by the Normans at the time of the conquest. But it is just as likely, if it did not exist before, that it was introduced by the Romans. We know that the cherry was, although Mr. Loudon states differently; for Pliny, in lib. xv., cap. 25, says, "*Cerasi ante victoriam Mithradaticam L. Luculli non fuere in Italia. Ad urbis annum DCLXXX. is primum vixit e Ponto:*

annisque CXX. trans Oceanum in Britanniam usque pervenere." Seeing, then, that they introduced the cherry and the vine, it is quite probable that they introduced the apple also; for, according to the same author, apples were held in such estimation among them as not only to procure renown to those who propagated them, but also to those parts of the country whence they were brought, (lib. xv. cap. 14.) He also mentions that, in the suburbs of Rome, the fruit produced from the apple trees realized more to the owners than was formerly obtained from farming.

If, then, the apple was so valued by the Romans, we have every reason to believe that this warlike people, who carried their luxuries wherever they extended their conquests, were just as likely to introduce it to our island as they did the cherry and the vine. Indeed, we are informed by Tacitus, that all fruit trees succeeded in Britain except the vine, the olive, and such others as require a warmer climate. But even supposing the apple was not introduced by the Romans, there were other means by which it could have existed in this country prior to the Norman conquest. The monks, who ever ministered to their temporal as well as to their spiritual necessities, and some of them, perhaps, more to the one than the other, were in constant communication with the Continent, and particularly with Italy; and I think it quite probable that they too were the means of introducing it. But, be that as it may, I cannot reconcile myself to believe that the apple did not exist in Britain before the time above mentioned.

The subject to which I wish more particularly to direct attention now is, the nomenclature of some of our oldest apples, whose names either convey no meaning at all, or have become so distorted as to lose all trace of the original form.

Juneatings.—These, of which the White Juneating is the type, are among our oldest varieties. The forms in which we find the name written by the old authors are Jennetting, Ginetting, Geanetting, Juneting Juniting, and Jeniting; and it is not till towards the close of the last century that Abercrombie, who is the first author in whose writings we so find it, calls it Juneating. I have no doubt that this last form was adopted in order to convey what appeared to him to be the proper signification of the word June-eating, i. e. ripe in June. Dr. Johnson writes it Gineting, and says it is a corruption of Janeton (Fr.) signifying Jane or Janet, having been so called from a person of that name. But notwithstanding this opinion of the great lexicographer, I am induced to think differently. All authors who have mentioned this variety—and some of them lived at a period when it is said the summers were hotter and more precocious than they are now—agree in fixing the period of its maturity at the end of July; so that I conceive Juneating has as little reference to the origin of the name as Julyflower has to Gilliflower, or Sparrowgrass to Asparagus.

In early times, it was customary to make the festivals of the Church periods at which occurrences were to take place, or from which events were dated; and, even at this day, we find the country people, appropriating some operation for St. Thomas's day, and some other operation for St. Andrew's, Michaelmas, Allhallow-tide, or other holidays. So also it was

usual in former times to name fruits from the day about which they arrived at maturity, such as the Margaret Apple from being ripe at St. Margaret's day, the 20th of July; the Magdalene, or Maudlin, from St. Magdalene's day, the 22d of July, and in "*Curtius Hortorum*," we find "*A tempore maturitatis Joannina vocamus, quod circa divi Joannis Baptistæ nativitatem esui sint.*" J. Baptista Porta also says, "*Est genus alterum, quod quia circa festum divi Joannis maturescit, vulgus Melo di San Giovanni dicitur.*" On the Continent, therefore, these early apples were called Joannina, Gallice Joannet; thus we have, among the old French pears, *Amiré Joannet*, the Admired or Wonderful Little John, which Merlet informs us is so called because it is in maturity at John's day. If, then, we add to Joannet the termination *ing* so common in our names of apples, we have Joanneting, which, with a slight transformation, gives us Jennetting.

*Pearmain*s.—These also are among our oldest English apples, and of which I believe the Winter Pearmain is the type. In this, I suspect, I differ from the Horticultural Society's Catalogue of Fruits, where the "*Old Pearmain*" is made synonymous with the Herefordshire, or Royal Pearmain; but still, I am of opinion, that the Winter Pearmain is the original. It is mentioned by Gerard, in his "*Herbal*," in the "*Husbandman's Fruitful Orchard*," and by Ralph Austen, whilst I find no notice of the Royal Pearmain, till the time of Rea (1665), of which he says, "*It is much bigger and better tasted than the common kind.*"

It seems to have been long a matter of doubt, as to the origin and signification of this word Pearmain. My attention was first attracted to its derivation, by observing, that Gerard writes it *Pearmaine*, and both in "*The Husbandman's Fruitful Orchard*," and Coles's "*Adam in Eden*," it is written *Peare-maine*. The last syllable of the word being the same as I had observed *Charlemagne*, written *Charlemaine* in works of these periods, suggested the idea that Pearmain was similar; and as *Charlemagne* is *Carolus Magnus* gallicised, so also *Pyrus magnus* gallicised gave *Poire magne* (the large Pear), which, slightly transformed, is *Peare-maine*, or *Pearmain*. The name of the Pearmain is, therefore, in allusion to the shape of those Apples so called, being similar to that of a Pear.

Pippins.—This is derived from the French word *Pepin*, signifying a kernel, or the seed of Apples, Pears, and Quinces. I am not prepared to say, what variety is the type of this class, if, indeed, there is any one more than another, for I find the term applied by the early authors, not only to the seed, but to seedling Apples generally. Thus we find, Leonard Mascall, in 1572, instructing "*Howe to dung your wyldre trees come of Popynes,*" and "*when so ever ye do replante or change your Pepin trees from place to place, in so removing often the stocks, the frute thereof shall also change, but the frute which doth come of graffing doth alwayes kepe the forme and nature of the tree whereof he is taken: for as I have sayde, as often as the Pepin trees be removed to a better ground the frute thereof be so much amended.*"

Queenings.—These, of which the Winter Queening is the type, are also

among the oldest varieties cultivated in our orchards and gardens. Like those mentioned above, the name is of French origin, and is derived from *coin*, a corner, from the appearance of corners or angles on the sides of the fruit; hence, also, we have coins or quoins, the corner stones of a building. This seems to have been the sense in which our early Pomologists viewed it, because Rea, in his "*Pomona*," when speaking of the Winter Queening, says, "it succeeds incomparably on the Paradise Apple, as the Calville and all other sorts of Queenings do," regarding the Calville also as a Queening, because of the angularity of its shape.

It will be observed, that the names of the fruits noticed above, are derived from the French, but it does not follow that the fruits themselves were introduced from the Continent. We have no mention of any of these varieties by the early French writers; on the contrary, De Quintinye, in speaking of the Pearmain, calls it "*La Druë Permein d'Angleterre*," the dense English Pearmain, in allusion, I apprehend, to the firmness of its flesh.

When it is considered that the French was, for a long period, the spoken language of the higher classes of this country, we need not wonder at our oldest fruits receiving French appellations; they rather confirm us in the belief, that they existed in the country long before the period at which authors generally have fixed their introduction. It is on this account, therefore, that I believe the varieties I have here noticed, so far from being of foreign origin, are the original and rightful representatives of our early English Pomology.—(*Gardeners' Chronicle*, 1849, p. 180.)

Treatment of Cactuses in Windows and in the Open Air.—The plants commonly called by the name of Cactus belong to the natural order Cactaceæ, but are known, among botanists and scientific gardeners, by various appellations more or less distinctive of their generic peculiarities; as, for instance, the Epiphyllum, from a Greek word signifying upon a leaf, in allusion to the flowers growing upon the flat stems, commonly called leaves; and the Cereus, so called from the waxy and pliant nature of the shoots of some of the species, the Latin word *cereus* meaning waxy. Cactuses are very common in this country, on account of the rough treatment they will bear; for, although they are natives of hot climates, as Brazil, Mexico, and Peru, and consequently are soon killed by frosts, yet, in other respects, they are sufficiently hardy to allow of their general cultivation. They are magnificent objects in the stoves and conservatories of the wealthy, where they startle by the contrast between their gorgeous flowers and wrinkled unsightly stems; they also help to set out many a cottage window, and they are usually found, to some extent, among the floral collections of the middle classes. Yet with this general disposition to cultivate them, few plants are less understood in those habits on which their successful flowering depends.

"I wish you would look at my Cactus," said a lady to the writer the other day; "it is a very fine plant, but it never flowers." On being introduced to this unproductive occupier of pot and window room, a fine piece of vegetation indeed presented itself; above a yard high, as green as grass, and every flat stem as plump as a traditional alderman. "Madam," said

the writer, "you feed your plant too much, and, in order to make it flower, you must, at certain times, adopt the starving system." He informed her that he had one of the same kind, commonly called *Cactus Jenkinsonii*, not near so tall, and very inferior in *en-bon-point* and general handsomeness, which yet bore above 100 flowers last season. The inquirer expressed her wonder at this, and received the following account of the method adopted to produce such a result; it is now submitted to those readers of the *Chronicle* who may wish to make fat and green Cactuses bring some tribute to their floral temple.

In the natural home of the Cactus, there is a moist and a dry season; during the former, vegetation receives a surprising impetus; during the latter, it flags, and appears almost burnt up and destroyed. Cactuses may be seen shrivelled up through the heat of the sun and the dryness of the soil, but it is to this circumstance they owe their abundance of flower-buds. The wet or moist season returns, and pushes those buds into a glorious life. How different is this natural treatment from that adopted in windows and often in greenhouses! The plants are kept wet all the year round; they have no cessation in their growth, but they form no flowers. Let Nature be followed, and the desired result is sure. My cactuses were put away in the autumn into a lumber room, and have had no water since until the middle of last March. They were then brought out covered with dust, cleaned, and gradually supplied with water. They are now as plump as can be wished, and are covered with flower-buds. They will be kept supplied with moisture until the flowering is over; then they will take their chance in a sunny part of the garden, against a south wall, until cold weather comes and consigns them again to the lumber room.

A light soil, composed of brick rubbish mixed with loam and leaf-mould, is best for them, and need not be changed every year, if the top is removed, and a fresh layer put on every spring. Large Cactuses cannot be grown well in windows, and my plan with them is to put them out of doors every day, where they will have all the sun, and to bring them into the sitting-room just as they are about to flower. The whole tribe is easily propagated. The cuttings should have the wound healed before being potted, and no water should be given for a month or six weeks afterwards. Such is my simple plan.—(*Gard Chron.*, 1849, p. 229.)

Joskin's St. Alban's Grape.—Have any of the purchasers of this grape yet fruited it, so as to prove whether it be a distinct variety or not? I bought two or three plants of it, and it is my present impression that it is nothing more than the Chasselas Musqué, or Wilmot's Muscat; at least my plants present no possible difference from that variety either in foliage or fruit. On referring to Mr. Thompson's report of it in the Journal of the Horticultural Society, I find that it agrees with that variety in every particular. No one can have a higher opinion of Mr. Thompson's pomological knowledge than myself, and it was solely on his recommendation that I became a purchaser; yet one would suppose that the Chasselas Musqué was a grape common enough not to be mistaken for a new variety; its only fault is its liability to crack long before it becomes ripe; this has nearly thrown it out

of cultivation. *John Spencer, Bowood, April 3.* [If you have got the true Joslin's St. Alban's, you will observe that its leaves are more glossy on the under sides than those of the Chasselas Musqué. Mr. Joslin states that the Chasselas Musqué had not been grown at his place for upwards of 16 years; that it is an early grape, whereas the St. Alban's is decidedly a late one. "The variety in question" he states "came from seed of my own sowing, be what it may." Much has been said about this grape. Some have doubted its being distinct from the White Frontignan, although the one has smooth leaves and the other has not. A few months will prove that it has not been over-praised in the Journal of the Horticultural Society. It is showing fruit in the Royal Gardens at Frogmore; we have seen it at Mr. Bevan's, Cambridge House, Twickenham, about a week ago, and it appears to be an extraordinary bearer.]—(*Gard. Chron.*, 1849, p. 229.)

Fastening Fruit Trees to Walls.—The following method of fastening the shoots of fruit trees to walls has been tried in one or two gardens in my neighborhood; and has, after a few years' trial, been found to succeed remarkably well. Strong wires are stretched vertically along the face of the wall, about the distance of half an inch from it; and about nine inches from each other, by means of iron stay nails; which are simply small flat pieces of iron about three inches long, half an inch wide, and pointed at one end, so as to go in between the bricks; a small hole is drilled in the other to let the wire go through, or to fasten the ends to; these are required for about every two feet in height. The wire should be painted, or, what I believe is better, galvanized. To these wires, the branches can be tied in any direction; the stronger ones by willow twigs, the smaller by strings of matting.—(*Gard. Chron.*, 1849, p. 230.)

The Night-blowing Cereus.—This is an old and much neglected, but, when well grown, really beautiful stove plant. I, for one, must accuse myself of neglecting it for many years, and the only reason which I can assign for such neglect is having never seen it grown or flowered in perfection. It has a straggling appearance, but, when strong and neatly trained to a wire frame or wooden trellis, it is not unsightly; its large white and yellow fragrant flowers are truly beautiful, and though an objection may be raised against their blowing in the night, every one who has seen them must admire them; the plant which flowered with me was a very old one, but, notwithstanding its age, it produced flowers measuring from seven to ten inches across, and I should think that young and vigorous plants would be much finer.—(*Gard. Chron.*, 1849, p. 230.)

ART. II. Domestic Notices.

Fuchsia serratifolia.—You have no conception of the beauty of *Fuchsia serratifolia* (blooming all winter,) when carefully treated. Avoid burn-

ing heat,—a cool and moist situation; it commences blooming in December, and even to March is loaded. The flowers are very long, and of a singular rich bronzy pink,—long tube, and beautiful tip of green and dark pink (not crimson,) corolla, and so well displayed on the plant: but it wants careful treatment to develop its beauty—it cannot be least—nor can one in ten bloom it as it ought. It is, you know, a peculiar hybrid one, and oddish, but then the greater the credit to bring it out; most persons who purchase it complain that it does not grow, and, after a while, neglect and lose it; but it is from a want of a knowledge of its treatment.—*Yours, G. C. T., Auburn, N. Y., April, 1849.*

Thuja filiformis hardy.—We learn from Messrs. Parsons & Co. of Flushing, that a small plant of this singular pendulous Thuja stood out the past winter without being in the least injured, thus proving that, at least, as far north as New York, it is perfectly hardy. The scarcity and high prices of the plants, has thus far prevented our hazarding our specimens in the open ground; but the coming winter we shall endeavor to try one in the latitude of 42° north.—*Ed.*

Swan's Orange and Ronville Pears.—Last autumn, when we had the pleasure of exhibiting some remarkably fine specimens of Swan's Orange Pears, which we gathered from a tree in Rochester, some of our pomological friends in Salem and vicinity, hinted that it was nothing more than the old Ronville of *Duhamel*; specimens of which were exhibited by Mr. J. F. Allen, of Salem; and we gave specimens to several amateurs to test with the Ronville. That the two varieties have a similarity of appearance, we are ready to admit, but not further, than that of size and form; in quality, the Ronville is only second rate, and could not, for a moment, be mistaken for the Swan's Orange; but even if a specimen of each variety had been selected, which resembled each other in quality, the character of the tree and wood, *at once* decides the question beyond all doubt; and in this case, as in many others, it shows how important in the description of a pear, is a knowledge of the color of the wood, &c. Swan's Orange has a very *light yellow wood*, while that of the Ronville is of an *olive green*. Four years ago, we made a drawing and a description of the Ronville, from some very fine specimens given us by Mr. Allen, but we never thought it scarcely good enough to include in our descriptive list; but as so much has been said about it, in connection with Swan's Orange, we shall give a full description and outline figure, which can be compared with those of the Swan's Orange.—*Ed.*

Aberdeen Beehive Strawberry.—This celebrated new variety, which was first introduced last spring, has not yet fruited sufficiently to test its qualities for general cultivation. As a *forcing* strawberry, it is one of the most remarkable varieties, coming nearly or quite up to all the raiser of it ever stated. We have now fifty pots in full bearing, having ripe and green fruit and flowers, and buds. The fruit is of good size, and high flavored, and each plant, though only under ordinary treatment, has from ten to twenty clusters of fruit, bearing from ten to twenty berries each; it is a stam-

inate variety, and sets its blossoms well. We consider it a great acquisition. The vines are very hardy.—*Ed.*

North American Pomological Convention.—Since our notice of the meeting of this convention at Syracuse next September, we have received a *new* circular issued by the committee, *with the names* of each member attached thereto. There was, indeed, no necessity of issuing a second circular, only to show the utter falsity of the assertions made in the editorial notice in the *Horticulturist*, which we alluded to in our last. Although we have anticipated the doings of the committee in that notice, yet we cannot omit the publication of this circular:—

“The undersigned, a committee of the above convention, who were appointed at the meeting held in Buffalo last September to report such plans for the organization of future conventions—should it be deemed advisable to hold them—as might be deemed necessary to carry out successfully the objects for which they were to meet, agreed, after consultation, as part of their plan, to appoint committees for each State, Territory, and the Canadas, whose duty it should be to report the results of their observations and consultations in relation to matters suggested for their action in a circular—(which was issued by us and sent to each one of them)—on the first day of the assemblage of the convention, which was, by unanimous resolution, agreed should be held in the autumn of 1849.

The committee have had their attention called to an editorial in the *Horticulturist* for March, in which it is stated that the North American Pomological Convention is a defunct convention, and that the State committees have received the compliment from a committee which does not exist, or by an authority unknown. Without intending in any way to comment on the article alluded to, the committee think it their duty to remark, that, by a perusal of the report of the proceedings of the Buffalo Convention, it will be seen that the report of this committee, making the convention a national and a permanent one, was adopted unanimously; that it is entirely unconnected with the New York State Agricultural Society, and that the designation of the time and place for its next meeting, where the great fair of that society is to be held, was done for the better accommodation of the public who are in the habit of attending it from all parts of the country, and also as a compliment to that society, in acknowledgment of the great benefit they had conferred on horticulture, by being the *first* to move in calling a National Pomological Convention. The committee, owing to the hurried close of the Convention at Buffalo, had not time to concoct, or submit fully, their plans for the consideration of the convention, and, in doing it thus far afterwards, they conceive that they are carrying out the true spirit and intent of their appointment, and that their action will meet with the approbation of all concerned.

The committee, therefore, hope, that the gentlemen appointed will not be deterred, by the article above alluded to, from attention to the several duties which have been submitted for their action, as the North American Pomological Convention will convene at Syracuse, in the state of New York, on the 14th day of September next, at 10 o'clock A. M.—it being

the day succeeding the closing of the annual fair of the New York State Agricultural Society.

Pomological, Horticultural, Agricultural, and kindred Societies, or Associations, throughout this continent, are requested to send delegates to the convention; and gentlemen resident in vicinities where no societies exist, who take interest in the advancement of pomological science, are also invited to attend.—J. D. G. NELSON, Indiana, *Chairman*; JAMES DOUGALL, Canada; HERMAN WENDELL, M. D., New York; J. C. HOLMES, Michigan; LEWIS F. ALLEN, New York; F. R. ELLIOTT, Ohio; N. GOODSSELL, New York, *Committee*. *March, 1849.*”

[We will only add, that we hope the course taken by those who are opposed to the holding of the Convention will incite its friends to renewed exertions to make it what the last was, the most important pomological convention ever held in this country. We should not forget to announce that Gen. Taylor intends to honor the State Fair with his presence, and we expect such an exhibition of fruit will be made as will give the old Hero a good impression of what the West, the North, and the East can do in the cultivation of the choicest varieties.—*Ed.*]

Thuja filiformis.—We learn, from Messrs. Parsons, of Flushing, L. I., that this most graceful and interesting evergreen tree has stood the late severe winter in the open air at that place uninjured; thus proving it to be perfectly hardy—at least as far north as New York; and we hope to show, another year, that it is equally hardy in the latitude of Boston. Our specimens, now about three feet high, have been too valuable to prove, but now that we have succeeded in getting a small stock, we intend to plant the largest specimen in the open ground the present spring, and let it remain out next winter. Its singularly pendent branches will make it the most attractive of all evergreens for single objects on lawns or in pleasure-grounds.—*Ed.*

ART. III. *Massachusetts Horticultural Society.*

Saturday, March 3d, 1849.—An adjourned meeting of the Society was held to-day,—the President in the chair.

Exhibited.—**FLOWERS:** From Messrs. Hovey & Co., cut flowers of several azaleas, among which were three seedlings. From Jas. Nugent, fine roses, including some good species of *Chromatella* and *Solfataire*.

FRUIT: From Hon. J. S. Cabot, *Beurré d'Aremberg*, and *Winter Nellis*, in fine state of preservation. From C. Downing, *Ladies Sweeting Apples*. From J. Owen, handsome apples without name, from the garden of Dr. Ware, Cambridge; it may prove to be the *Westfield Seek-No-Further*.

March 10th. Exhibited.—**Flowers:** From Messrs. Hovey & Co., six azaleas, viz.: *Remingtonii*, *triumphans*, *Herbertii* *purpurea*, *splendens*, *Rosy Purple*, and *Salmon Rose*. Roses from L. Davenport and J. Nugent. *Bouquets, &c.*, from A. Bowditch.

AWARD OF PREMIUMS.

AZALEAS.—To Messrs. Hovey & Co., for the best six plants, \$6.

FRUIT: From J. Kenrick, Cogswell apples, which the committee pronounced worthy of cultivation. From S. Bigelow, Keen's Seedling strawberries, very handsome.

March 17. Exhibited.—Flowers: From Jas. Nugent, a variety of roses and bouquets. Roses, bouquets, &c., from L. Davenport and Sam'l Bigelow. From Dr. Wood, Dighton, plants of *Erica Cáfra* and *Diosma Capitata*.

[The business meeting of the society will be given in our next.]

HORTICULTURAL MEMORANDA

FOR MAY.

FRUIT DEPARTMENT.

Grape Vines in the greenhouse will now have all their fruit set, and the same treatment may be resumed which was given them previous to their blooming, viz.: more air, more frequent syringings, damping down the walks, &c. The laterals will again need stopping, and any that are not regularly laid in should now be duly attended to, and tied in their places. By the last of the month, the berries will have sufficiently swelled to commence thinning; and this should be looked to before they are too far advanced. Vines in cold houses will need the same treatment we recommended for those in the grapery last month. This month is a good time to plant out vines in new borders. Vines in the open air will now be swelling their buds, and should be neatly trained to the wall or trellis, rubbing off all eyes that are not wanted, and, in June, cutting back to the new growth: this will prevent any danger from bleeding, if any is apprehended. Borders of grapes should be carefully dug this month.

Strawberry beds may be made now with the best success; manure well, and spade or trench the ground.

Fig trees in pots should be well watered, using liquid manure occasionally.

Raspberry plantations should be pruned, staked, manured, dug, and put in good order.

Grafting pear and apple trees may yet be continued with good success.

Pruning should be continued until all the work is accomplished.

FLOWER DEPARTMENT.

Camellias will now have completed their growth, and the temperature should be slightly raised in order to make them set their buds well. As soon as the buds are seen, the plants may be removed to the open air. Plants inarched in February may now be detached from the old plant.

Achimenes of all kinds may now be started for a succession of flowers; and those first potted may now have a third shift into larger pots.

Cactuses will now be displaying their flower-buds, and will need tolerably abundant supplies of water.

Chinese primroses of the double kinds may now have a shift into larger pots, if fine specimens are wanted.

Chrysanthemums may yet be propagated from cuttings.

Gladiolus gandavensis, and other summer flowering kinds, may now be planted in beds in the open ground.

Fuchsias will need a shift into larger pots; give them a close warm situation, and they will make large specimens.

Pelargoniums will now be coming into full bloom; see that the house is well fumigated to get rid of the green fly; as it is better to do it now than to wait till the flowers get fully open. Water freely, and occasionally with liquid manure, or guano.

Ranunculuses will now be throwing up their flower stems, and, if the weather should prove dry, they should be liberally watered, giving the water between the rows, and not over the foliage.

Pansies, raised in pans, and potted off, should now be planted in the open ground, selecting a good soil, and a cool situation.

Heaths in small pots should now be shifted into a larger size, and the pots plunged in the open ground the last of the month: *Mediterranea* and some of the more common kinds may be turned out of the pots into the border.

Carnations and *picotees* will now need some attention; keep the beds clean, and stir the surface of the soil: if all are not planted out, proceed with the work till done.

Roses in pots should now be turned out into the border, first making the soil rich and deep. Annual roses should be now pruned if not already done. *Prairie roses* should have the old wood cut clean out, unless there is a deficiency of young last year's shoots.

Verbenas may be planted out in the open border the last of the month, when all danger of frost is over.

Choice annuals, such as *asters*, *balsams*, &c., sown in boxes, should now be potted off singly in small pots, and they will make fine specimens for turning into the border in June.

Calceolaria seedlings should now be potted off from the seed pans into small pots, putting one plant in each. Old plants coming into bloom will require to have their flower stems carefully staked.

Japan lilies should be shifted this month into larger pots: water now more freely, and keep in a rather cool situation.

Euphorbia jacquiniiflora.—Now is the time to raise a stock of this fine winter-blooming species. Cuttings put in this month will make fine plants by autumn.

Hardy annuals, such as *chryseis*, *alyssums*, *mignonette*, *eutoca*, *candy tuft*, and other showy kinds, should be sown this month,—some of them where they are to grow, and the others in small beds, from which they can be removed to the border.

THE MAGAZINE OF HORTICULTURE.

JUNE, 1849.

ORIGINAL COMMUNICATIONS.

ART. I. *On the Acclimation of Tropical Exotics in Florida.* By the Rev R. K. SEWALL, East Florida. *In a Letter to Dr. A. Mitchell, St. Mary's, Geo.* Communicated by Gen. H. A. S. Dearborn.

DEAR SIR,—I enclose letters from Dr. Mitchell, of St. Mary's, Georgia, and the Rev. R. K. Sewall, of East Florida, on the Culture of Tropical Plants, which I will thank you to publish in your instructive and highly useful Magazine. With sincere esteem, your most obedient servant, H. A. S. DEARBORN.

Hawthorn Cottage, Roxbury, May 10, 1849.

MY DEAR SIR,—I here submit to you a correspondence from the Rev. R. K. Sewall, of E. Florida, on the acclimation and cultivation of tropical plants in South Florida. We are truly pleased to learn, that the labors of the cultivator have been crowned with success in the region alluded to, and that the luscious fruit of the *Bromeliaceæ* will soon be added by individual effort to the extensive list of our introduced fruits. We have heretofore maintained, that the most active agent in the dispersion of plants is man; and that plants of opposite zones can be brought to exist on food not naturally suited to its constitution by care and proper cultivation. Reasoning from analogy, we are well convinced of the important facts before us—and do anticipate that it will not be long before these small fruiteries, now established by individual enterprise, will become an extensive article of exportation; alike profitable with a ready supply for our home consump-

tion, at the 'same time influencing our General Government to aid in the establishment of an Experimental Garden for the introduction of thousands of useful species from Tropical Asia, Africa, and America. You will please publish the enclosed in the Magazine of Horticulture and Botany, edited by C. M. Hovey, Esq., of Boston. With great esteem, I am, dear sir, very respectfully yours, AUGUSTUS MITCHELL, M. D.

St. Mary's, Georgia, April 29th, 1849.

HON. H. A. S. DEARBORN.

MY DEAR SIR,—At your request, I herewith submit certain facts, relating to the experiment of vegetable acclimation in Tropical Florida, which have passed under my own observation, or have come within the range of my knowledge.

In the year 1828, a gentleman of science and experience strongly urged on government the project of a national acclimating nursery, to be located in Tropical Florida, supported by a train of analogies, meteorological observations, and reasoning, which gave great plausibility to his positions.

So far as experiment has tested his conclusions, they have been fully verified. He recommended, with great confidence in the success of the pine apple tribe, the acclimation of that tropical exotic.

And what has been the result? In *Nov.* 1847, and *Jan.* 1848, I made an exploration into Tropical Florida below 28 degrees, and down to 27 degrees 15 minutes. I there found settlers, many of whom had come from the north, and an account of whom I gave you in my last. Nearly all of them had entered upon the culture of the tropical pine apple, and had larger or smaller patches on plantations of the pine plant under process of actual growth.

Mr. Burnham, an original settler, and late representative from St. Lucie county, and one of the most extensive planters of this fruit, furnished me the following statement relative to the pine apple:—

"The first slips of the pine I put out 20th August, 1843. I then put out 46 slips. They bore fruit in 1845; the fruit matured about the 10th of July. Since that time, from the original 46 slips, I have increased to 3500 plants, one half of which will bear next July. The apple does as well in Lucie, if not better, than in Cuba. The fruit is larger and finer."

The settlers and planters, I am persuaded, are in error in attempting to cultivate one plant to the square foot. The plants should be three feet apart. The pitahaya, or strawberry pine apple of Yucatan, should be speedily there introduced, together with the large and delicious sugar-loaf pine of Cuba.

The gentleman above alluded to also recommended, "as of immense value, the peculiar species of fibrous Agave, cultivated in Yucatan, whose fresh leaves yield the foliaceous fibres called the Sisal Hemp." A slip of this plant was introduced some ten years since. It has now become acclimated, and is being self-propagated through various sections of Tropical Florida. The plant was pointed out to me on the banks of St. Lucié Sound, where it was spreading itself independent of the skill and care of man.

The same gentleman also remarked, in the same connexion, "that the successful culture of the tea plant of southern China, at Rio Janeiro, will rapidly arrive at maturity in the arid sands of any tropical climate; and that their plucked leaves are speedily prepared for exportation by the most simple apparatus, &c."

I received from H. E. Perrine, Esq., in November last, the following statement:—"At Indian Key, (Tropical Florida,) my father had a tea plant growing in the open air, which he took great pride in, as it demonstrated the truth of what he contended for, *i. e., that the soil of Tropical Florida was peculiarly adapted to its growth.*"

The cocoa-nut tree, I may add, I saw growing on the banks of St. Lucié Sound, from three to five feet high, then recently planted by the settlers.

From the facts above stated, it may be safely assumed that experiment will realize the suggestions of Dr. Perrine relating to the acclimation of other fruits and plants. "Even the cultivated chocolate tree will perish unless protected by the shade of other trees, and can hence be propagated in the marshy woods of Tropical Florida.

"As the pimento tree of Tropical America, and the cinnamon tree of Tropical Asia are disseminated in the most extensive forests by birds and beasts alone, it may be safely predicted that, if a single plant of each shoot comes to matu-

rity in Tropical Florida, they will both be spread over the whole peninsula."

And finally, as to a direct and pleasant route of communication with this interesting section of our country, delicious in climate, promising in its resources of tropical produce, when fairly and skilfully opened, I have to say that, while nature has barred the rivers and harbors of the East Coast, on which the climate of tropical winter ranges highest, she has cut a natural channel via the St. John's and Indian Rivers, for a great inland thoroughfare, beautified with the varied transitions of a semi-tropical to a tropical vegetation—traceable along the whole line. Enterprise, on the St. John's, is the present depot of steam navigation. The line, continued a short distance above this point to the head waters of the St. John's, will touch a point but seven miles distant from the shores of the Indian River, which is navigable for steam to the mouth and up the waters of the St. Lucie Sound and River to within a short distance of the eastern shores of the great lake Okachober. This is a route continuous to Savannah and the city of Charleston, and is relieved of the perils and inconvenience of a sea voyage.

Thus nature has provided a way for steam communication, by the most pleasant route, into a most delicious climate for human health and tropical growth; and all it wants is a little capital and enterprise to open this way to the influx of invalid travel from the north, and tropical export from the south. Yours, truly, R. K. SEWALL.

We are highly gratified in being able to communicate this interesting correspondence through our Magazine. We have ever felt a deep interest in the subject of the acclimation of tropical plants in the southern states, and have been firm in the belief that, at no very remote period, a larger part of the valuable fruits and plants of the West Indies and South America, as well as of the East Indies, would be found naturalized in Tropical Florida, and, eventually, many of the more hardy ones as far north as Virginia.

It was from this great interest in so important a subject that we occupied several pages of a previous volume of our Magazine, (VL, 1840,) in publishing the interesting commu-

nications of the late lamented Dr. Perrine, who fell a victim to his zeal in carrying out his views upon the formation of a preparatory nursery for the introduction and acclimation of tropical plants. The receipt of Mr. Sewall's article has brought up the matter fresh to our minds, and his letter fully confirms all that Dr. Perrine anticipated in reference to the naturalization and growth of certain species. Dr. Perrine's only desire was that his life might be spared long enough to see the most "precious plants of the tropics actually spreading in Tropical Florida." (Vol. VI. p. 327.) The Sisal Hemp plant he especially urged as one of the most important which could be added to the country, and now Mr. Sewall states that it has actually become naturalized, and is "spreading itself independent of the skill and care of man."

In our volume for 1847, (XIII. p. 363,) we copied an interesting article from the *Gard. Chron.*, detailing an experiment with the culture of the pine apple in the *open air* in England, which proved quite successful: such being the fact, can it be doubted that this most luscious of all fruits will succeed throughout the greater part of Florida, and eventually become so extensively cultivated as to supply our markets with pine apples in abundance as well as in perfection of growth?

We trust Dr. Mitchell will induce his friends to communicate further information on the growth of tropical plants in Florida, as few subjects can be more important to the agricultural interests of the country.—*Ed.*

ART. II. *Remarks on Gardening and Gardens in Louisiana.* By ALEXANDER GORDON, Botanical Collector, Baton Rouge, La.

DEAR SIR,—A long period has elapsed since I raised my pen to address you. Since then, I have traversed many a dreary waste, and many fertile regions, having twice, during the interim, extended my researches to the Rocky Mountains, California, Oregon, and New Mexico, on botanical pursuits;

but, now having a leisure hour, I shall occupy the time in making a few Remarks on Gardening and Gardening Productions in the state of Louisiana.

Gardening, in this section of the Union, differs widely, in many respects, from the system practised in the North and Middle States; this semi-tropical climate affording numerous advantages unattainable in a more northern clime. During the month of February, I visited a vast number of gardens in New Orleans—its vicinity, and for 130 miles up the Mississippi. Even at that unfavorable season, from the mildness of the winter, I found a tolerable display of Flora's beauties, the gardens, as it were, conjuring up a spring-like appearance in the gloomy season of winter. The various plants, &c. in bloom were, to me, equally astonishing as gratifying. Many varieties of the rose were displaying their gaudy flowers, and exhaling their fragrance in profusion. Many exotics, planted in the open ground, were then blooming freely, and most of them had been so during the previous season from the months of April and May. My attention was particularly arrested by a magnificent *Crinum amabile*. I had never seen this rich gem, under the most fostering care, present such a splendid appearance. Most of the following were blooming vigorously :—*Heliotrope*, *Plumbago*, *Petunia*, *Russellia*, *Céstrum*, *Achània*, *Justicia*, *Verbena*, *Manettia*, *Brugmansia*, *Hibiscus*, (Chinese sp.,) *Strelitzia*, &c. &c. In many gardens the camellia was flowering to admiration, and, in favorable situations, several Chinese azaleas were truly magnificent. Many other species might be mentioned, did time and space permit; but the above will convey some idea of a Louisiana *winter's* vegetation.

Vegetables are also most abundant during the winter. Here there are two regular seasons for sowing general crops, fall and spring; and, during winter, turnips, carrots, parsnips, beets, celery, spinage, lettuces, radishes, &c. &c. are in the greatest profusion.

You are well aware the ornamental department of gardening is my more particular province, and here I find a rich and varied field. 'Tis most astonishing to witness with what luxuriance every variety of the rose grows, and, in many instances, without the least attention or care. Here the Noi-

settes and Tea roses develop their magnificent flowers in full perfection. The carnation, pink, and picotee succeed well; Gardenias and Lagerstroemias are perfect pictures in their season. The dahlia thrives to admiration. Oleanders, Night and Day scented jesamines, (Cestruums,) Allôysia, citriodôra, Erythrinâs, Plumbagos, and Clerodendrons are all planted in the open ground. In severe winters, they may be killed down, but they again shoot vigorously in the spring, and grow and flower most luxuriantly. Pittosporum, O'lea frâgrans, and the Chinese magnolias, attain a size which is most astonishing; but neither tulip nor hyacinth succeed well, although I am inclined to attribute the failure more to the soil, (which could be obviated,) than to the climate, as I have seen the latter in great perfection one degree south of Savannah, state of Georgia. Neither the genus Pelargonium, Fuchsia, nor Calceolaria are calculated for this meridian. The summer appears to be too long, the heat too intense, or the aridity of the atmosphere during the summer months is too much for these beautiful genera, and either kills them entirely, or they become so exhausted that they scarcely recover during the winter, and the succeeding season puts a *finale* to their existence.

There are some very extensive gardens in this state; that of Mr. Valcouraam, in the Parish of St. James, about 60 or 70 miles above New Orleans, would bear a comparison with any garden in the United States. If we take into consideration its extent, the vast and varied collection of plants, trees, and shrubs, its hothouses and ornamental buildings, I am inclined to think it is unsurpassed, if equalled, by any in the Union. It was intended, as I have understood, to make this a transcript of an English pleasure ground, but I must confess, in that respect, the designer has been by no means successful. This leads me to remark, in general, the French style in the ornamental department of gardening is that most frequently adopted, particularly among the Creole portion of the population, and there are some very unique and judiciously arranged gardens laid out and kept according to that system, which, however much it may be repudiated by some, possesses a fascination under peculiar circumstances. For instance, within a few minutes walk from where I now write,

I could find magnificent groves of magnolias (now in full bloom,) with an abundance of choice trees and shrubs. All that would be required to form the scene into a perfect *fac simile* of an English shrubbery would be to introduce walks, and judiciously thin out and regulate the mass. To those, therefore, who have such scenes daily under their view, a perfect contrast—something displaying the art and ingenuity of man—has a far greater tendency to arrest the attention, and call into requisition the approbation of the community; but I would by no means be understood as advocating the adoption of straight lines and clipped shrubs in a general way. The parks, groves, and squares, formed by Le Notre, the father of that system, can never, in my estimation, bear a comparison with the scenic beauties formed by the principles advocated and practised by Kent, Price, Knight, and Repton. This, however, is merely a matter of taste, which, as respects gardening, is, in many instances, very arbitrary, and may yet be just. I shall, therefore, pass over the matter, and state that the great and almost general error when forming a garden is,—no expense is spared in the first instance—a vast space is embraced—the subsequent necessary care never taken into consideration. The consequence is, the whole, or, at all events, the greater portion, is allowed to become a wilderness. How much more prudent to have *counted the cost*, circumscribed the limits, and kept the *whole* in a manner which would give satisfaction to the owner, justice to his plants, trees, and shrubs, and pleasure to the gardener; but what will ever prove a most serious impediment to the neat keeping of pleasure grounds in the Mississippi bottoms of this state is the “Bitter Cocco,” (*Cyperus hydra*.) This detestable pest has completely overrun the country, and the gardener’s place is no sinecure, who endeavors to keep his grounds in order, if he has this curse of the vegetable world to contend with.

Baton Rouge, La., 8th May, 1849.

We are glad to hear from our old correspondent, and shall be pleased to receive further accounts of the state of gardening in the vicinity of New Orleans, where Mr. Gordon has now located himself. We trust we may have some hints on

the cultivation of those plants and shrubs which require peculiar management in the south, that our many readers in that section may avail themselves of his good advice.—*Ed.*

ART. III. *Descriptions and Engravings of Select Varieties of Apples.* By the EDITOR.

XXXI. SUTTON BEAUTY.

THERE are quite a number of seedling apples cultivated in Worcester county, and some of them appear to possess great merit. Recently, through the influence of the Worcester County Horticultural Society, whose exhibitions of fruit, particularly of apples, have been remarkably fine, many of these seedlings have been, for the first time, brought to the notice of pomologists, and already several have been selected which appear to be not only very new, but superior kinds for general cultivation. We have, in our Pomological Notices in our Magazine, (X. p. 211,) named several of them, but the Sutton Beauty has more recently been introduced.

Our correspondents, Messrs. Earle and Jacques, of Worcester, sent us some specimens of the Sutton Beauty, which we had the pleasure of seeing upon the tables of the Society, at the Annual Exhibition last September, and we have found it so excellent an apple, as well as one of the most beautiful with which we are acquainted, that we have given it a place in our descriptive list of select varieties, with the belief that it will become a very popular fruit.

The Sutton Beauty, (*fig. 23,*) originated in the town of Sutton, in this State, and has, as yet, been but little disseminated. It is of good size, with a brilliant crimson glossy skin, and a white flesh. The tree is vigorous, and produces great crops, bearing, like the Baldwin, only every other year.

Size, medium, about two and a half inches broad, and two and a half deep: *Form*, roundish oblong, regular, largest near the middle, and narrowing little to the crown: *Skin*, fair, smooth, glossy, with a pale lemon yellow ground, finely striped with light red in the shade, and nearly covered with

brilliant crimson scarlet on the sunny side, through which appear numerous yellow specks: *Stem*, medium length, little more than half an inch long, rather slender, and inserted in a moderately deep and somewhat open cavity: *Eye*, small, closed, and rather abruptly depressed in an open, little fur-

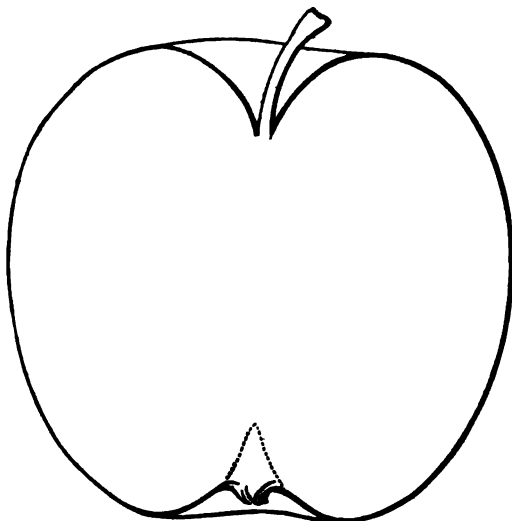


Fig. 23. Sutton Beauty Apple.

rowed basin; segments of the calyx long and twisted: *Flesh*, white, slightly tinged with pink, rather coarse, crisp, and tender: *Juice*, plentiful, very pleasantly acid, sprightly and high-flavored: *Core*, medium size: *Seeds*, large, plump. Ripe from November to March.

XXXII. BULLOCK'S PIPPIN. *Coxe's View, &c.*

Sheepnose, of some, according to Coxe.

Golden Russet, Manning's *Book of Fruits*.

American Golden Russet. *Fruits and Fruit Trees of America*.

Under the name of Golden Russet, this fine apple, (*fig. 24*), is considerably cultivated in various parts of the country. How it came to be more generally known under the name of Golden Russet, than that of its original cognomen, as described by Coxe, we are not aware; Mr. Manning, we believe, was the first author who described it as the Golden

Russet; Mr. Kenrick describes one under the same name; but, as he states it to be a *round* apple, we are not sure that he refers to this one. Thatcher follows *Coxe*, and calls it the Bullock's Pippin. Mr. Downing, in the *Fruits and Fruit Trees of America*, discarding all priority, gives it an additional title, and calls it the American Golden Pippin; alledging that the "uncouth name of *Coxe*, *Sheepnose*, is nearly obsolete, except in New Jersey." This is an error, as Mr.

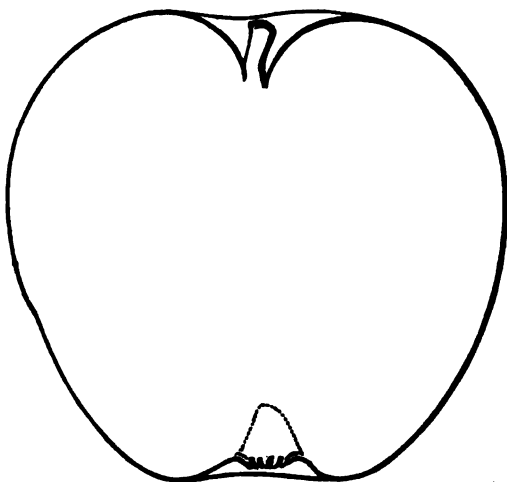


Fig. 24. *Bullock's Pippin Apple.*

Coxe calls it the Bullock's Pippin, after a family of that name in Burlington County, New Jersey, where it originated; and he particularly remarks that it is "generally distinguished by the vulgar name of *Sheepnose*," thus showing that he was unwilling to perpetuate an uncouth term.

Mr. *Coxe* states that this is one of the finest apples in New Jersey in the autumn and early winter months. It possesses a remarkably tender flesh, and its golden russet skin gives it a peculiarly rich and handsome appearance. The tree grows vigorously, and makes a round regular head, and, in addition to these good qualities, it is an early, abundant, and constant bearer. Wood dull yellowish brown.

Size, medium, about two and a half inches broad, and about two and a half deep: *Form*, conical, regular, full at

the base, and narrowing to the crown, which is small: *Skin*, slightly rough, with a deep yellow ground, nearly or quite covered with a clear cinnamon russet, often with a tinge of pale red on the sunny side: *Stem*, short, about half an inch long, rather slender, and little sunk in a small cavity: *Eye*, medium size, nearly closed, and but little depressed in a small, shallow basin; segments of the calyx short: *Flesh*, yellowish, fine, soft, and tender: *Juice*, abundant, pleasantly acid, rich, and high-flavored: *Core*, medium size, rather open: *Seeds*, rather large, dark brown. Ripe from October to February.

XXXIII. COGSWELL.

The origin of the Cogswell apple, (*fig. 25*), is unknown to us. The only specimens of the fruit we have seen, have been exhibited before the Massachusetts Horticultural Soci-

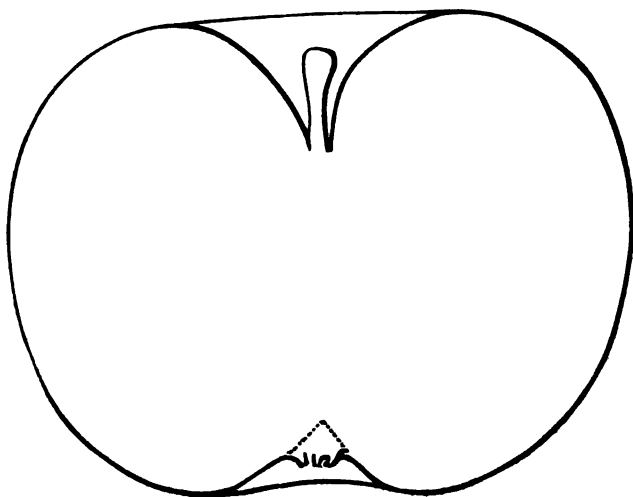


Fig. 25. Cogswell Apple.

ety by Mr. J. A. Kenrick, of Newton, Mass., and these have been of such excellence that we venture to place it among our best winter apples. As late as February last, Mr. Kenrick presented two or three dozen of the apples for exhibition; the specimens were remarkably fair, large, and beautiful, and

in the most perfect preservation ; and the Committee on Fruits, upon tasting them, pronounced the variety to be well worthy of cultivation. The tree is of vigorous growth, and bears well.

Since writing the above, we have received the following communication from Mr. Kenrick, to whom we applied for an account of the origin and history of this apple :—

DEAR SIR,—The Cogswell apple was received by me *fourteen* years since. The only information I could obtain from the gentleman from whom I had it was, that “it came from Attleboro’, or its vicinity.” I have always supposed it originated there, but, having taken no pains to ascertain, am not certain. By whom its name was given, I have no knowledge. When it first fruited with me, I do not recollect, as it was grafted on a large branch of a tree, together with several other kinds, but it came very early into bearing. It is a good straight grower, and I think as abundant a bearer as any apple I am acquainted with. It is an early winter fruit, keeping a little longer than the Hubbardston Nonsuch, being fit for use from October to about the 1st of January : I have, however, kept them till June. Those you saw were kept too late to give a fair specimen of their real merit, and, should I live till autumn, I will show you samples that will give you a better opinion of their flavor ; and I consider it second, for *profit*, to very few if any apples I am acquainted with.—
Very respectfully yours, John A. Kenrick.

Size, large, about three and a quarter inches broad, and two and a half deep : *Form*, roundish oblate, very regular, largest in the middle, and little flattened at each end : *Skin* fair, smooth, rich deep yellow, nearly covered with very distinct and abrupt splashes, stripes and dots of brilliant red, having a few large russet specks scattered over the surface : *Stem*, short, slender, and moderately sunk in a very regular, open cavity : *Eye*, medium size, nearly closed, and slightly depressed in a very small shallow basin ; segments of the calyx broad : *Flesh*, yellowish, little coarse, crisp, and tender : *Juice*, abundant, with an agreeable admixture of sweet and acid, sprightly, high-flavored, and excellent : *Core*, small, rather close : *Seeds*, medium size, angular, dark brown. Ripe from October to February.

ART. IV. *On the Culture of Clerodendrons.* By R. B.
LEUCHARS. New Haven, Conn.

THE Clerodendrons are a most noble family of half-shrubby, half-herbaceous plants, with very large oblong-ovate, or acute lobate leaves, sinuated, or angled at the margins, and bearing, generally at the end of each shoot or stem, large capitate heads of flowers of various colors, and some of them are delightfully fragrant.

I believe there are few amateurs who cultivate this splendid tribe of plants in this country. And I think I may assert, without fear of contradiction, that there are few, who have seen them in all their splendor, who would not wish to have them in their collection, however small the collection might be. They are of easy cultivation, and exceedingly well adapted for the adornment of greenhouses during the hot months of summer, a period when these structures, instead of being, as they certainly ought, the centre of floral attraction, are frequently converted into receptacles of lumber and rubbish, thereby becoming a kind of floricultural incongruity in the midst of the floral harmony that reigns around them, and lying like a dead weight upon our sensibilities every time we cast our eyes upon them; and, as they are generally erected in the most conspicuous places, they can hardly be avoided. Such plants as the Clerodendrons, together with gesneras, gloxinias, torenias, achimenes, &c. would keep the house in a blaze of bloom during the hottest of seasons, *i. e.*, providing it be kept shaded, and a moderate degree of humidity artificially maintained.*

In the artificial culture of any kind of plants brought from the tropical latitudes, I consider it essentially requisite to inquire into its habit, and the treatment it receives in its natural habitat. It will generally be found that the closer we approach to the culture it gets from nature, the more likely will it be to develope its natural beauty. If the plant be sensibly improved by certain modes of management, then we conclude that it has found the conditions in which it has

* We are glad to see that some gardeners are aware of the importance of what we have so strongly urged in an article in our volume for 1847, (XIII. p. 258.)—*Ed.*

been placed more suitable for its development, and consequently to be adopted. There are very few plants that show so strikingly the effects of good culture over bad treatment and neglect. *Clerodendrons*, if not grown well, are scarcely worth growing at all. For the benefit of those who may not be acquainted with the tribe, I shall describe a few of the most desirable kinds, and the method of management by which I have grown them to great perfection.

Fràgrans.—A beautiful pink, and highly odoriferous.

Paniculatum and *squamatum* are bright scarlet.

Macrophyllum and *sinuata* are pure white; the latter is very fragrant.

Scandens.—A pretty climber, finely adapted for the green-houses of this country. The stem and branches of this species are nearly quadrangular, and slightly pubescent; leaves in pairs somewhat downy; flowers are borne abundantly in corymbs which spring from the axils of the leaves; the blossoms are white, and tinged with purple. It produces flowers abundantly in winter. This is a most valuable species, and should be in every collection of greenhouse plants.

Capitata.—This is a truly noble flowering plant. It forms a handsome bush, with obtusely tetragonous branches, and large, dark green leaves. The young leaves are subovate; the larger ones oblong and acuminate, covered with ferruginous or brown hairs, bearing, on terminal peduncles, a dense head of purely white blossoms, and delightfully fragrant. This species has the merit of flowering when very small, and remains a long time in bloom.

Bethuniæna.—This is, perhaps, the most beautiful of all these beautiful plants. It is a native of Borneo, and was imported from thence into England a few years ago. It grows to the height of ten or twelve feet, bearing, at the point of every branch, a large spike of rich crimson-colored flowers. The spike itself is frequently three feet in height, and seldom under two, forming with its bracts, which are also crimson, a magnificent pyramid of bloom, each blossom being relieved by the delicate white centre of long protruding stamens. The foliage is also fine, being heart-shaped, dark, dense, and of elegant appearance. This is by far the noblest plant I ever saw, and, when in flower, is worth a day's journey to see.

On receiving young plants from a nursery, they will be generally in very small pots, with their roots cramped into a firm mass. The best time to transport these plants is before they have begun to grow. Otherwise, it is difficult to pack them without breaking their leaves, which, when young, are brittle and tender. When ordered in the spring, they will generally be received in a growing state. If in a six inch pot, it should be shifted into one double the size; the roots carefully spread out among the fresh soil. They luxuriate in a compost consisting of two parts decayed turves, one part fibrous peat, and one part well-rotted cow dung. Let the whole be well incorporated together, and use only the rough lumpy portions. The fleshy roots of these plants delight to ramify in open lumpy soil, where the air has free access to them. The pots should be drained with charcoal, and lumps of the same material liberally intermixed with the soil. The leaves of these plants appear to possess an extraordinary power of decomposing carbonic acid, which is evident by the great power that the roots possess of absorbing carbonaceous matter from the soil. I am of opinion that the clerodendron possesses this decomposing power in a greater degree than any other plant with which I am acquainted. I have tried to grow the *C. sinuata* in charcoal alone, liberally watered. Its leaves were a very dark green, but its flowers were small and dingy-colored. It grew beautifully in equal parts of charcoal and loam. But the compost I have named is most suitable to all the species. When potted, introduce them into a temperature of about 60°; a small pit or cucumber frame is a good place for them while they are small enough to find head-room. In a fortnight or three weeks, they will require another shift, and on successively, as the roots reach the side of the pot, from nine inch to sixteen, and finally into eighteen inch pots in which they will flower. In the early part of spring, they should be aired and watered very carefully, the latter applied always in the morning, and warmed to about 70°. This is of more importance to growing plants in winter than is generally supposed. As the season advances, both may be supplied more liberally. They delight in a humid atmosphere, and shaded from the hot sun. They should be syringed morning and evening with diluted charcoal wa-

ter. About the beginning of July, they will be about five or six feet high, and coming into bloom. They may then be placed in the greenhouse or conservatory, where they will continue in flower for a long time.

When the plants are done flowering, they may be taken from the greenhouse, and placed in any airy situation to ripen their wood. When cold weather sets in, keep them dry and free from frost until they show signs of starting into growth.

As soon as the buds begin to swell, they must be repotted. Shake the old soil clean away from the roots; cut the stems down to within six or eight inches of the root; put them in pots as small as you can get the roots in without chafing them; place them in a gentle bottom heat, if you have it; if not, place them in a warm part of the greenhouse, and treat them as before recommended. It must be borne in mind, that these plants should always be repotted before they start into growth, but they ought to be cut down a fortnight before you wish to pot them. Clerodendrons are easily propagated either by seeds or cuttings; the latter method is generally adopted, as some of the species are shy in producing seeds. Cuttings of the old wood, after the plant is cut down for spring potting, will root freely, but cuttings from the young wood make the best plants. They will strike quickly in a bottom heat; when they are rooted, pot them off, and treat them as old plants.

New Haven, April 30th, 1849.

ART. V. *On the Culture of the Daphne Odora.* From the *Gardener's Chronicle.* With Remarks by the EDITOR.

Few plants have more attractive qualities than the *Daphne odora*. Beautiful in its foliage, and deliciously fragrant in its pretty umbels of white flowers,—blooming, too, at a season when there are but few such flowering plants, it has unusual claims upon the care and attention of the amateur cultivator. Like many other plants, it is of simple management when once its habits are well known. Yet it is not often seen in very good condition, and this neglect in its cul-

ture has contributed to render it less sought after than many other less beautiful plants. Our correspondent, Mr. J. W. Russel, who was a most successful grower of the daphne, contributed an article in our first volume, (I. p. 296,) upon its cultivation; but so long a time has elapsed, and as many of our present readers may have never read his excellent paper, we copy with pleasure the following article from the *Gardener's Chronicle*, being more full and complete than any thing we have lately read upon the same subject. With good judgment, no amateur cultivator can fail to raise fine specimens of this fragrant and popular plant.—*Ed.*

“The great anxiety manifested nowadays for the possession of plants that are called new is, I fear, producing, in many instances, the effect of pushing aside some of our old plants, with which very many of the new ones are not to be compared. Without affecting to despise novelties, or to be indifferent to subjects of the most recent introduction, I am anxious to call attention to some old and valuable, but comparatively neglected plants.

One of this description, I believe, is the *Daphne odora*, whose claims on our notice, in point of usefulness, are perhaps second to none. Flowering at a time when flowers are so much wanted to enliven our conservatories, or for decorating the drawing-room, renders a good stock of it a great acquisition. I am aware that many plants might easily be enumerated, with whose gaudy appearance this is not to be set in competition; but, among all the winter flowering plants with which I am acquainted, I could not point out another that would more amply repay the labors of the cultivator. And yet, if you go into any place where the introduction of new plants is much attended to, the chances are you do not see it at all; and, if you do, instead of it occupying the prominent place it deserves, you will generally find it pushed into some out of the way corner of the greenhouse, as if it were an object totally unworthy of our care or attention. In such situations, its appearance is just what might be expected from such unkind treatment—a few sickly-looking leaves on the top of long straggling branches, and looking altogether as if it would say, “Give me air or I shall die.” But under the influence of more generous treatment, how different its aspect—

round bushy plants, with branches covered with foliage of a healthy dark green, and exhibiting fine trusses of highly fragrant flowers during the most dreary part of the year, from the end of October till the middle of February; and, be it remembered, without any forcing, except the protection afforded by a cool greenhouse.

To those who would encourage the cultivation of this fine old plant, I would (in the absence of any thing better,) recommend the following simple mode of management as having succeeded tolerably well at this place. As soon as the plants have done flowering, remove them to a cold pit. Vine-ry not at work, greenhouse, or any other structure, where they can be placed in such a manner that they shall not be shaded or crowded by taller plants. In general, those which have been standing in the drawing-room will have suffered, in some degree, from the dry close atmosphere; more especially if they have been allowed to remain there for any length of time after having done flowering, because, at that time, they commence growing, and the young shoots, from want of light and air, will be drawn up weak and long-jointed. This ought to be prevented by removing them before all the flowers have quite fallen off. If the plants were properly attended to the previous summer, and the points of the shoots pinched out where the plant wanted filling up, it is not advisable, at this period, to resort to pruning or cutting back; as young shoots spring in abundance immediately below where the flowers were produced, and always flower much better than shoots out of older wood. But, in special cases, when plants have, from neglect, been allowed to run up with naked stems, cutting them down to within six inches of the pot is, perhaps, the best way of reclaiming them. As this *Daphne* does not make very large roots, it has, therefore, the very desirable property of being capable of thriving in pots comparatively small for the size of the plant. Yet it is necessary, about the end of March or beginning of April, to ascertain if any of them require shifting, which, if properly executed, will be quite sufficient till the next spring. Old plants, however, which it is not desirable to increase much in size, will do well for two, and sometimes three years, without shifting. The soil I have found to suit them best is a mixture of light

turfy loam, sandy peat, and well decomposed leaf-mould, in about equal quantities, together with what is indispensable to success under any circumstances—a thorough drainage, to ensure a free passage for the escape of superfluous water.

After having been shifted and arranged, it will be better to keep them for a short time a little closer than usual, till the roots begin to lay hold of the fresh soil; and most particularly to guard against over-watering, till the roots have found their way to the sides of the pots, otherwise the soil will become sodden, and the roots perish in consequence. As a general rule at this stage, no more water ought to be given than just sufficient to keep the plants from flagging. They will nevertheless be very much assisted by being gently syringed mornings and evenings. About the end of May or beginning of June, the plants which were shifted in the spring may be supposed to be again well established in their pots, and growing freely; if so, occasional waterings of weak liquid manure will very much encourage a healthy action, and enable them to form large trusses of flowers in autumn. But to old plants, with their pots pretty full of roots, liquid manure may be applied with advantage from the time they commence growing. Or what answers a very good purpose is, a good mulching of half decomposed cow or sheep's dung, through which all the water applied to the plants must pass, and consequently carrying with it a certain portion of the fertilizing properties of the dung to the roots; and, by preventing evaporation in some degree, will so much encourage the roots nearest the surface, that the dung, at the end of a few weeks, will generally be found matted by them.

A practice prevails with some gardeners of placing their *Daphnes* out of doors, with other greenhouse plants, during summer. But, unless the means be at hand of protecting them from the direct rays of the sun on the hottest days of summer, and heavy drenching rains in autumn, no advantage will be gained by adopting such a course: as they will be found to succeed much better in a pit, where shading can be easily applied when necessary, taking the lights off in the evening to give the plants the benefit of the night dews, and putting them on again in the morning, before the sun gets too powerful; admitting plenty of air during the day, to make the plants stiff and short-jointed.

If, in hot dry weather, red spider should make its appearance upon the leaves, let them be well syringed with clean water, applied with considerable force early in the afternoon; shutting them up close for the night, to keep a moist atmosphere about them; repeating the operation for several days in succession, and that pest will soon disappear.

By a little attention in summer, their flowering season may be very much prolonged. This is to be effected by setting aside some plants, and giving them only a partial supply of water for about six weeks, which will check rapid growth, promote the ripening process, and act on them, in some measure, as a season of rest. Then induce them, by giving copious waterings of weak liquid manure, to make another growth in autumn, thereby causing their flowering points to be formed at a much later period than they otherwise would have been. Plants treated in this way will not commence flowering generally till some time in January, instead of the usual season, November.

The *Daphne odora* is easily propagated by cuttings in February, planted in sandy peat, and placed in a gentle bottom heat, with a close, humid atmosphere. The cuttings I have found to make the best plants are the tops of last year's shoots which have flowered during the winter; allowing that portion where the truss of flowers had dropt from to remain on the top of the cutting, which, from the number of buds formed close together around that place, will generally break from three to six young shoots; thereby laying the foundation of a fine, handsome, bushy plant. Good plants may also be obtained by grafting on the Spurge Laurel, (*Daphne Laureola*,) and placing them, till a union takes place, in a similar situation to that recommended for cuttings.

If any remark I have made in this paper be the means, in the most remote degree, of drawing the attention of those who have the convenience at command of doing justice to this neglected plant, my object will be fully accomplished. Planted out in the border of a conservatory, orangery, or camellia house, it would be quite at home, and be an object of considerable interest during the whole winter; and prove invaluable to those who require noseays at that dull season."

ART. VI. *Descriptions of Ten New Verbenas.* By the EDITOR.

LAST year, in describing several new verbenas, (XIV. p. 220,) we made some remarks relative to the growth of seedling varieties, and stated that we had but little doubt, now that bi-colored flowers had been produced, we might, ere long, look for spotted and striped sorts of great beauty. This has already nearly been accomplished. We saw, in a bed of seedlings in the nursery of Messrs. Ellwanger & Barry, Rochester, N. Y., last autumn, some very pretty varieties, one of which was a tolerably distinct stripe. If the plants were saved, and seeds selected from them the present season, we do not doubt the next progeny would be some very distinctly variegated flowers. Continual sowing is the only way to arrive at great results, and this, we trust, every lover of this most brilliant flower will not fail to do.

We now have the pleasure of describing several of the most beautiful seedlings of last year:—

1. *General Taylor*. (Barry's.) Flowers medium size, lilac rose, beautifully edged and shaded with violet: petals rather undulated: umbels medium size and full: habit similar to Gem: foliage small, dark green. A decidedly new and unique variety.

2. *Harlequin*, (Barry's.) Flowers medium size, creamy blush, mottled with bright rose: petals, somewhat wavy: umbels good size, rather flat: habit moderately vigorous: foliage slightly pubescent. Very pretty.

3. *Apollo*, (Hovey's.) Flowers large, rich deep vivid carmine rose, with a large pale eye: petals flat, and of good substance: umbels large, rather flat: habit moderately vigorous: foliage good. This is one of the most brilliant crimson verbenas we have ever seen.

4. *Louise*, (Hovey's.) Flowers medium size, deep glowing cherry color: petals flat, and well formed: umbels medium size, good form: habit moderately vigorous: foliage good. A very distinct and rich colored variety.

5. *Chameleon*, (Hovey's.) Flowers medium size, bright rose, with crimson eye, changing to pale pink; an umbel of flowers often having several shades of color from the centre

to the circumference: petals flat and well formed: umbels large, round and full: habit moderately vigorous and good. This is a very striking and beautiful variety.

6. *Eliza*, (Hovey's.) Flowers large, of a soft, glossy, and very deep rosy pink shade: petals large and little reflexed: umbels large, globular, compact, and finely formed: habit and foliage excellent. A superb variety.

7. *Anne Marie*, (Hovey's.) Flowers very large, rosy salmon color, shaded with pink; petals large, firm, and little cupped: umbels very large, rather flat: habit similar to *Caroline*, which it somewhat resembles, but has a more salmon tint.

8. *Sarah*, (Hovey's.) Flowers medium size, pale pink, with a large straw-colored centre: petals medium size, and slightly crimped at the edges: umbels well formed: habit good. A distinct and pretty variety, the straw-colored eye making a delicate contrast of colors.

9. *Gracieuse*, (Hovey's.) Flowers large, yellowish white: petals broad and cupped: umbels large, rather flat, and of good form: habit vigorous: foliage good. A large and fine showy white variety, of which we as yet have so few good ones.

10. *Celestine*, (Barry's.) Flowers medium size, clear lavender blue, with radiating veins from the eye, which gives them a striped appearance: umbels rather compact and well formed: habit moderately vigorous: foliage broad and handsome. This is a very fine addition to the blue tinted verbenas.

ART VII. *Remarks on the Cultivation of the Fuchsia.* By W. SAUNDERS, New Haven, Conn.

So popular has this class of flowers become, that it is almost a matter of astonishment to find a collection of plants without some of them. They are so well known to every one having the least acquaintance with flowers, that any description of them is unnecessary; yet the estimation in which they are held, their various habits of growth, and the changes

that have taken place in the recognized properties which constitute perfection, have induced me to treat upon them somewhat more largely than their general simplicity of culture may seem to demand.

The Fuchsia is a native of South America, and, when the *F. coccinea* was first introduced into England, some sixty years ago, it was regarded as a floral wonder. Since then, there have been several introductions of different species, among the most conspicuous of which may be mentioned *F. splendens*, *F. dépendens*, *F. corymbiflora*, and, more recently, *F. serratifolia*; from these the many hundred varieties and indistinct subvarieties which now exist have been obtained by hybridization.

In the culture of this plant, the habit and general tendency of growth of the shoot ought to be studied; many of the recently introduced varieties have derived their principal value from their habit of growth; while many of the best flowering varieties have very indifferent habits. Much can be done, in cultivation, to improve their habit and appearance; some of them are of an upright, strong, gross habit; while others assume a graceful pendant form. In general, the former kinds require to be limited in pot room, and frequently topped when growing; while the others are shown to greatest advantage by training a single erect stem, and allowing the side branches to hang gracefully down, pinching the point out of any over-luxuriant shoot, cutting out all confused branches, and otherwise forming a fine, symmetrical plant, well furnished with foliage from the top to the surface of the soil.

The majority of fuchsias ripen seed freely; but, unless they are hybridized, it is almost waste of time to sow it, for the flowers so produced are seldom equal, and more frequently inferior, to the parent plant. The operation of fertilizing is easily performed on the fuchsia, the pistil being prominent, and the pollen plentiful. In selecting plants for hybridizing, it is necessary to bear in mind that those bearing the seed will communicate their habits to the seedlings, although the plants from which the pollen is taken may be of indifferent habits, provided the flowers have good properties. Having selected the flowers intended to be fertilized, cut out their

stamens as soon as they open, and, when they are fully expanded, apply the pollen from their flowers, the properties of which you wish to impart: tie something round them to distinguish them from the others, and, when they are ripe, the seeds may be separated from the pulp by washing them out in clear water; the good seed will sink to the bottom.

The seeds may be sown any time in the early part of spring, in a pot of light soil, and placed in a greenhouse; they do not require much heat to vegetate them; at least I have found them come up quite as well, if not better, without it, and the plants so produced are much stronger than those raised in a higher temperature. As soon as they are of size to handle nicely, pot them singly in small pots, and place them in a light airy situation; if they are grown in a close atmosphere, it tends to draw them out weak and lanky, so that the true habit of the plant is not seen; shift them into larger pots when necessary; a four or six inch pot will be large enough, as large shifts only tend to keep them growing, and retard their flowering; they should never be topped or pruned until they flower. The principal object is to mature their growth quickly, so that the flowers may be seen as soon as possible. Many of them will bloom the same season; after they have done growing, and the foliage drops off, they should be sparingly watered, and be kept almost dry all winter. The following spring, water them freely, and, when they show signs of growth, place them where they will have plenty of air and light, but do not shift them until they flower for reasons before mentioned. I prefer flowering seedlings out of doors, after all danger of frost is past, as I have invariably found that the colors come brighter and more distinct than when kept in the house. It is desirable, however, to choose a situation where they will be somewhat shaded from the sun in the hottest part of the day.

The fuchsia is not very particular as to soil; any good garden mould will suit the plants well enough, provided it is of a free porous texture, and the pots well drained. Many of the strong growing sorts are frequently destroyed by being put into large pots in a rich soil. This is often the reason why *serratifolia*, *fulgens*, *corymbiflora*, and some of these sorts are shy in flowering. I once potted two plants of *serratifolia*,

the one in rich turfy loam and dung, the other in a poor worn-out soil, mixed with a few pieces of broken bricks; the consequence was, that the former grew most luxuriantly, and showed no flowers at all till late in the fall, whereas the other made a very short growth, and flowered profusely the greater part of the season. The less robust varieties, such as *Venus victrix*, *globosa*, &c. do better when planted in good loam, with about a third part of well decomposed manure.

Cuttings of all the varieties root so readily, that it is unnecessary to enter into any detail concerning their propagation by this means, further than to remark that, when young, they should not be allowed to flower. This, they are very apt to do, even in the cutting pot. All such blooms should be picked off on their first appearance.

There is little difficulty in growing large specimens of the fuchsia. Old plants should be pruned back to within two or three joints immediately after they have completed their growth in the fall; they need but little further care all winter; they should be kept from frost, and get very little, if any, water. I generally make a practice of keeping them under the stage in the greenhouse, where I find they require no water at all until I wish them to grow in the spring. I then give a liberal supply, and, after they show signs of growth, turn them out of the pots, and shake the greater part of the old soil away from the roots, repotting them in fresh soil, in about the same sized pots, and watering carefully until they make fresh roots. I have tried them in all temperatures, and I find that the most handsome and most profuse flowering plants are those grown in a common greenhouse, where air is liberally admitted on all favorable opportunities. Larger plants can be produced when grown in a warm, close, moist atmosphere; but I fear little contradiction in saying that, with regard to flowering plants in general, beauty is a quality to be appreciated before size. When the pots are filled with roots, they may get another shift, and pinch the points out of all the shoots. They will thus make large plants, although they will be later in flowering.

Corymbiflora does well when planted out of doors in summer in a poor soil, where it will have plenty of room to dis-

play its beautiful large corymbs of flowers. Indeed, on account of its strong, uncouth habit, it is rather a coarse subject for a greenhouse under any circumstances.

From the immense influx of seedlings of late, much controversy has arisen, regarding the proper form of the flower, and the nature of its colors. This, no doubt, partly arises from the very natural partiality growers generally entertain for seedlings of their own raising; but, as some standard of criterion is requisite for the judgment of this important class of plants, I have taken the liberty of noting down those properties which are generally recognized by the most celebrated growers in Europe.

PROPERTIES OF A GOOD FUCHSIA.

THE PLANT.—"The habit of a fuchsia is a very important characteristic. Those that are of a lanky growth, having long joints, and their leaves distant, are objectionable. The plant should be naturally dwarf, of slow growth, and of bushy habit, short-jointed, with dark green leaves of good texture. With such a habit, they will, under any treatment, make handsome plants."

THE FLOWER.—"The footstalk should be long enough to let the tube hang below the leaves, so as to be fully displayed to view, and that the flowers may hang clear of the foliage."

"The flowers should come out at the base of every leaf. This is one of the best properties of a fuchsia, and one of the least attended to.

"The form of the flower-buds before they expand ought to be perfectly globular, because that is the most beautiful form before opening, and gives the greatest expansion of sepals when open.

"The corolla and calyx should be perfectly distinct in color: the greater the contrast between these the better: when both are of the same color, it is worthless: whatever be the colors, they ought to be striking and distinct.

"The tube should be short and the neck small, so as to be almost hidden by the reflection of the calyx.

"The sepals of the calyx should be completely reflexed, so as to form almost a globe over the tube when the flower

is fully expanded, showing the inner surface of the sepals, and the whole of the corolla, which is the richest portion of the flower.

"The corolla should be large and quite round, smooth at the edges, and open at the mouth, showing both their inner and outer surface: the petals should lie close over each other, be of good substance, and should fall at least half an inch below the calyx.

"The stamens should hang conspicuously below the corolla, and the pistil below them."

Notwithstanding the immense number of varieties at present grown, it is very questionable if any one possess all these properties combined. Many of them, however, possess them individually, and, from the natural aptitude of the fuchsia for hybridizing, I think we have no reason to despair of seeing them arrive at that state of perfection that one variety will possess all the properties here enumerated.

Although it is now almost discarded, or at least not generally cultivated, there is no one that can claim so many of these properties as the good old *F. globosa*; but, as is often the case, it is thrown in the back ground to make room for others that have been introduced with a high-sounding name, a fine, readable description, and—nothing else.

New Haven, May 28th, 1849.

ART. VIII. *Floricultural and Botanical Notices of New and Beautiful Plants figured in Foreign Periodicals; with Descriptions of those recently introduced to, or originated in American Gardens.*

The Rhododendrons of Sikkamhimalaya.—In another page of the present number, we have copied some account of these splendid Rhododendrons, of which a magnificent work has recently been published by Sir W. J. Hooker. As many of them will undoubtedly be introduced, and as every lover of this fine tribe must feel interested in the introduction of these new kinds, we copy the following brief descriptions of

the species figured and described in Dr. Hooker's volume. They are as follows :—

"*Rhododendron Dalhousiæ* is epiphytal, growing upon the oak, the magnolia, &c., at an altitude of 7,000 to 9,000 feet, of a light color.

R. barbatum grows to the height of 40 to 60 feet, is found at an altitude of 10,000 feet, and may be described as of a deep crimson or blood color, pronounced one of the finest of the Himalayan species, and is said to have stood the winter unprotected in Messrs. Dickson's nursery, Chester.

R. lancifolium. This attains the height of 6 to 8 feet. This is closely allied to *R. barbatum* in color and foliage, but smaller in all its parts.

R. Wallichii is a shrub attaining the height of 10 feet. The leaves and flowers of this resemble the *R. ponticum*.

R. Campbelliæ. This grows to the height of 40 feet, at an altitude of 10,000 feet. This is a near approach to the *R. arboreum* in habit and color of the flowers, which are in compact clusters; the leaves are small lanceolate, and covered with a light ferruginous substance underneath.

R. Raylii. This is described as a small shrub, and, though much smaller, the habit and appearance of the foliage would seem to be nearly allied to *R. campanulatum*. The flowers are of a brick red color, and something larger than those of *R. hirsutum*.

R. cinnabarinum, said to be still smaller than the last, and one of the most distinct as a species, and remarkable for the reticulated character of the leaves, both above and beneath. The flowers are very small and of a red color.

R. elæagnoides, found not in flower, and at an elevation of 10 to 15,000 feet.

R. argenteum. This is a magnificent object, with large light green foliage, scaly buds, and large handsome white flowers.

R. Falconeri. This is remarkable for its large oval foliage, reticulated underneath with a compact rather small head of not very large flowers, of a white color. We have in the preceding remarks noticed at some length both this and the former."

Dr. Lindley, in a notice of these Rhododendrons, makes the following remarks:—

“Dr. Hooker, whose beautiful book on Indian Rhododendrons has led us to make this remark, describes the climate which they affect as being warm and damp, with mild winters. “A certain degree of winter-cold and perpetual humidity is necessary; but the summer heat is quite tropical where some of the genus prevail, and snow rarely falls, and never rests, on several of those peculiar to Sikkim.” This will serve to guide the cultivator who may be inclined to try the experiment. We, however, anticipate that these epiphytes will grow better in earth, treated in the usual manner, than when struggling with the difficulties of an uneasy position on the bark of trees; for other epiphytes evidently prefer a more agreeable residence, and appear to confirm the justice of the opinion expressed by the late Dean Herbert, that the natural habitats of plants do not necessarily prove that they prefer them; natural localities only show that plants will grow there, although others may not be able. In other words, he did not believe that a plant which shoots from an old wall does so because it prefers old walls, but because it is capable of existing in such places; therefore it would be healthier and better if placed upon the ground.

The book which has led us to this question is a most beautiful example of fine drawing and skilful coloring, and the letter-press furnished by its talented author possesses very high interest. Of the species of rhododendron which he has found in his adventurous journey beyond the mountains of northern India, some are quite unrivalled in magnificence of appearance. *R. Dalhousiæ* has huge white flowers tinged with pink, each blossom forming a bell as much as four and a half inches long, and not less across the mouth; they are, moreover, sweet-scented, having the perfume of the lemon. *R. Falconeri* has close heads of pure white flowers, and enormous leaves netted on the underside with coarse green veins on a brown ground. *R. Argenteum* is only inferior to *Dalhousiæ* in its flowers, which are pure white, and seems to be far handsomer in its foliage, which is that of the broad-leaved laurel, but much larger, and silvery white beneath; they are described as being from six inches to a foot long, and three

to five inches broad, and, when young, to be enveloped "in large scales, so closely imbricated and so large as to resemble the cones of some species of pine." What a brood-rhododendron this would be! Of the others, which are less handsome, many are fine things, but not remarkable. *R. lancifolium* seems to be nothing but *R. Barbatum* without its beard, the latter being, as was remarked by a gentleman well acquainted with such subjects, to all appearance, a "mossy" state of the former. *R. Campbelliæ* and *Wallichii* are also fine things, with deep rose-colored flowers, but too much like the rose-colored *R. Arboreum*. The remainder are small mountain species in the way of *R. ferrugineum* and *hirsutum*.

Upon the whole, it is a marvellous lot of novelties to have been gathered out of one Indian province, and we recommend the district to the nurseryman. Whoever could bring home plenty of seeds of these things would require no better foundation of a little fortune."

The Funereal Cypress, a new Evergreen Tree.—This is the name of a new evergreen tree, hardy in England, and probably hardy in our climate. It has very recently been introduced, and we copy the following account of it from the *Gardener's Chronicle*. Should it prove hardy, it will be one of the greatest acquisitions to our evergreen trees. It will be noticed that it comes from the mountainous districts of Chinese Tartary, in latitude 41° 58' N. where the climate is full as severe as in the same parallel of this continent, and, as the tree pæonies, wistarias, and other shrubs from the same region are perfectly hardy, there can be but little doubt the Funereal Cypress will prove to be so.

"The introduction of a new hardy evergreen tree into this country is an event that is seldom noticed at first in the manner it deserves. This arises from our being in general imperfectly acquainted with the history of such plants; and the result is most unfortunate, for, till experiment has decided whether such a plant is hardy or not, nobody knows what to think or do—the seedlings are neglected, put aside, or ruined by being cramped in pots, and, at last, when their value is discovered, the race has become almost extinct, and the constitution of the survivors is, for the most part, ruined beyond recovery. This has most especially been the history of Conifers; and *Cryptomeria* is a striking example of the practice.

Of this fine species, thousands of seedlings were distributed by the Horticultural Society, and where are they now? The greater part have perished, because the public was unacquainted with the value of so beautiful an evergreen. There was no certainty that it was hardy, and now, that experience has shown that our winters will no more touch it than they will a Spruce Fir, the old stock is gone and fresh supplies must be sought in China. It was the same with the *Araucaria* of Chili, with the *Deodar*, and with many others.

An acquisition of the highest interest, lately received by Mr. Standish, of the Bagshot Nursery, will undergo the same fate, unless the history of it, and the certainty of its being still more hardy than *Cryptomeria*, shall be pointed out, so as to leave no room for misapprehension. We allude to the *Funeral Cypress*.

This plant was first mentioned in Lord Macartney's Voyage as growing in a place called 'the Vale of Tombs, near the tower of the thundering winds,' in the province of Zhe-hol; which is a mountainous district, lying in latitude $41^{\circ} 58' N.$, in Chinese Tartary, and has a far more rigorous climate than is ever known in England. The plants found in this province consist of hardy northern forms, oaks, elms, ashes, willows, pines, elders, *sophora japonica*, together with herbs of northern habits, calculated to bear severe frost, such as asters, *pæonies*, Solomon's seal, pinks, &c. In the foreground of the landscape representing 'the Vale of Tombs' is a specimen of *Funeral Cypress*, much resembling a weeping willow; and the weeping tree, so commonly represented in Chinese paper-hangings and porcelain, is evidently the same species.

The seedlings in the Bagshot Nursery were raised from cones lately procured by Mr. Fortune, while at Shanghae, from a place 200 miles to the north of that port. We have also received a dried specimen of it, which enables us to say that it must be a plant of the greatest beauty. It may be best described as a tree like the weeping willow in growth, with the foliage of the *savin*, but of a brighter green; it is, however, not a *juniper*, as the *savin* is, but a genuine *cypress*. It has long been a subject of regret that the Italian *cypress* cannot be made to endure our climate, and to decorate our burial-places; but we have now a finer tree, still better adapted for the purpose."

MISCELLANEOUS INTELLIGENCE.

ART. I. *General Notices.*

Raising Annuals.—The following is, perhaps, the most economical mode of raising annuals, with regard to certainty, and ultimate effect. Before proceeding, however, to detail the system, I feel induced to offer a few remarks on the general character and expression of annuals as objects of decoration, either in the parterre or for the unassuming flower border. Our present mode of clumping, as it is termed, has had the effect of forcing many of these interesting things into other and less legitimate situations in the garden. Thus, in later years, we find whole lines of *Clarkias*, *Collinsias*, *Chryseis*, and other gaudy annuals, occupying marginal borders, the facing of slips, or long promenades. These things certainly, in a hot summer's day, when all of a glare, take one by surprise; but, although they serve to astonish, they do not permanently please. The banishment of annuals from the parterre, however, has not been caused entirely by the clumping system; it has, in part, arisen from their too often unsatisfactory character in such a situation. If a wet summer supervene, the annuals are smothered with gross leaves, which give them a weedy appearance, the soil in which they are grown in general being by far too rich. They, moreover, spread so widely, that all become confused, and high keeping is at an end, unless the pruning-knife be applied, and then adieu to the beauties of the annuals.

I would not here insist that annuals should, by any means, be allowed to supplant the lovely *Verbena*, the *Pelargonium*, *Petunia*, the *Antirrhinum*, &c.; the question is, whether they can be made to combine with them, or whether any other situation can be found for them. As to a combination with our half-hardy bedding plants, the only thing on the face of the matter which offers any impediment, is the fleeting character of many of our annuals, together with their unruly habit of growth, as before named. By the plan I am about to propose, it will be seen that the first of these difficulties is readily overcome, merely by the ease, economy, and certainty with which successions can be produced and removed at any given period; so that, like "dissolving views," when the eye has been satiated with one picture, another and another may spring up in its room; and all this during one short summer. The second difficulty is removed by the very same mode, without any further concern; by the course I shall describe, the annuals will all be compact in growth, be the season what it may.

For beds of mixed character, which are in their very nature changeable, on account of the blanks caused in early summer by the decay of our most precocious floral beauties, the plan will be found eligible, and also for the mere flower border. The plan is simply using squares of turf from a very old pasture, representing, when in use, a small garden pot, but with this difference, that there is small expense in their making, less still in their carriage, and three distinct sowings at proper periods will provide against

blanks in the most extensive garden in Britain, to say nothing about their adaptation to a regular bedding system.

The first matter of import is to procure turves three inches thick, from any rest land which possesses a strong and tough sward or turf. I need scarcely point to very old pastures. I have, however, seen turf cut from common lands, nay, from country lanes, which was not to be excelled for the purpose. Having procured a lot of these in the early part of February, the next thing is to wait for bad weather, and, during such, without hindrance to other business, the little turf pots, as I must call them, may be cut off by hundreds in the course of a few hours by a man or two, who, not only can, but will work. It is best to place a level and strong board on the floor of the shed where the operation is performed; on this the turves may be cut with facility. Four inches square would seem to be the most eligible size of all others for the purpose; and if the turves have been cut one yard in length, by one foot in width, each turf will of course make twenty-seven of these little squares. This done, the next thing is to cut little hollows in the centre of each; these are scooped out with great ease with the point of an old knife; care must be taken, in this part of the operation, to leave an edge or bordering intact; such will constitute the rim, and will serve to retain the necessary amount of water.

The next point is to subject them to as strong a heat, either moist or dry, as will at once destroy not only all the vegetation which may exist, but also insects and their eggs. This is the only really tedious part of the process; we, however, find no difficulty worthy of consideration; for, during bad weather, we have recourse to one of Burbidge and Healy's boilers, which heats our Orchid house. Close to the shed which contains this, and as close to a permanent supply of water, we have established our depot; here the turf pots are placed when sown, in order to chime in with a system of watering which exists in that position; and where of course no neglect can take place.

Our boiler has a tap in the bottom for clearing out the pipes, being at the lowest level; and from this tap we can draw water heated to nearly 200°. Placing a large tub then beneath this tap, we three parts fill it with the cut turf pots, for so we must now call them. The tap is then turned on to them, and when the tub is full, the tap is graduated, so as to run away slightly, and in fact just enough to keep the water in the tub hot enough to destroy vegetation, the surplus water of course running over slightly, escaping by the stoke-hole drain close at hand. Our rude turf pots remain in for half an hour, and then give place to another lot, and so on.

I must now, before concluding, advert to one more most essential part of the plan, and which omitted, success would be rather problematical. This is a plot of ground so contrived as to bid defiance to slugs and snails. I have got some beds prepared by making an excavation of six inches, and then filling the hollow with clean cinder ashes. On these the slugs will not travel; but, in order to prevent all possibility of their doing so, I water the whole ash-bed, when completed, with the scalding water before alluded to, infusing as much salt in the water as it will carry previous.

The turves thus prepared, nothing more is necessary but to insert a pinch of seed in each, at the proper period, and to cover with a little soil, then to give the whole a watering, in order to close the soil about the seeds. The times of sowing must of course be regulated by the period during which they are required to be in blossom. If the proprietor is at home most of the summer and autumn, three distinct sowings should be made. One in the middle of March, a second the middle of April, and a third the middle of May. With such a provision, there need be no fear of a single blank in the parterre or flower borders, provided enough of the turf pots are employed.

Many of the dressy things of the May sowing, if removed to a cool aspect just before they blossom, will become so retarded as to be of much service in October for decorating the shelves of the greenhouse. They will be found to have rooted slightly through the turves, and may be taken up and inserted in small pots, filling round with a little soil; such, on a light shelf, will blossom for many weeks, and thus assist in filling up that hiatus which always occurs in October and November; when chilling storms have made the flower garden desolate. For the latter purpose, I would recommend the following especially, *Collinsia bicolor*, *Clarkia pulchella*, red and white; *Schizanthus* of kinds; *Kaulfussia amelloides*; *Lobelia*, the small dwarf blue kinds; *Gilia tricolor*, *Nemophila atomaria*, *Lupinus nanus* and *Hartwegi*; *Mignonette*, *Leptosiphons*. *Clintonia pulchella*, *Platystemon californica*, dwarf German Asters, *Phlox Drummondii*, *Schizopetalon Walkeri*, *Tagetes florida*, *Campanula Lorei*, *Gypsophila elegans*, &c. These I suggest as being of tolerably compact habit, good blooming properties, and by no means of a common-place character, for in the introduction of such things to the greenhouse shelves, the latter point should by all means be studied, in order to meet the eye of refined taste.

In conclusion, I would point to the eligibility of these little turves to the amateur, to assist in carrying out a system of window gardening; for although such persons will have their *Pelargoniums*, their *Ericas*, their *Camellias*, *Azaleas*, and even, as your correspondent "Dodman" suggests, their *Orchids*, yet the gaiety of these can scarcely be rendered of a continuous character; and here how convenient would be a little reserve ground—a miniature annual garden—where, at any period from May to December, the proprietor can, before breakfast any morning, bring in half a dozen of these little turf pots, just emerging into blossom. Such might either be inserted in a five inch pot, called 48s about town, or they might merely be laid in an ornamental saucer, and immediately surrounded with fresh moss, pouring a little water in the saucer.—(*Gardeners' Chronicle*, 1849, p. 260.)

The Rhododendrons of Sikkimhimalaya.—We lately noticed the announcement intimating the intention of Sir William Hooker to publish the *Rhododendrons of Sikkimhimalaya*; being an account, botanical and geographical, of the *Rhododendrons* recently discovered in the mountains of Eastern Himalaya, from drawings and descriptions made on the spot, during a government botanical mission to that country, by Joseph Dalton Hooker, edited

by Sir William Hooker, *Reeve, Bentham, and Reeve*. In the work before us we have eleven species described, and nine of these are new, *R. barbatum* and *R. arboreum* being the exceptions. The most remarkable are *R. Dalhousiæ*, *R. argenteum*, and *R. Falconeri*. The individual flowers of *R. Dalhousiæ* measure five inches from the base of the florets to the extremity, and four inches and a quarter across the mouth. The leaves of *R. argenteum* measure eleven inches in length, and upwards of three in breadth. The leaves of *R. Falconeri* measure one foot in length and six inches in breadth. *R. barbatum* has endured the winter at Chester. It is found at an altitude of 10,000 feet. This is not always a certain criterion of hardiness; it is, however, an approximation, and if so, then *R. Campbelliæ*, *argenteum*, and *Falconeri*, are all found at 10,000 feet of altitude, and will, at least, be what is called half-hardy.

Darjeeling, in the Sikkim portion of the Himalaya, is the native country of the plants figured in the splendid work before us, and is situated in latitude 27 deg. north, and in the longitude of Calcutta, distant from the latter place 380 miles, and at an altitude of 7,200 feet. The mean temperature of the year is given at 55 deg. Fahrenheit. The mean temperature of every month is also given, to which we add, by way of comparison, the mean of the last eight years for London, viz., 1841 to 1848, inclusive, the result of observations taken every two hours:—

	Darjeeling.		London.			Darjeeling.		London.	
	deg.	sec.	deg.	sec.		deg.	sec.	deg.	sec.
January,	41	0	37	8	July,	65	0	61	5
February,	43	0	37	1	August,	65	0	61	2
March,	53	50	42	2	September,	61	50	57	0
April,	57	0	47	1	October,	58	50	49	3
May,	59	0	53	6	November,	48	0	44	6
June,	64	0	61	1	December,	44	0	40	0

These columns of figures point to the important fact with which every gardener is familiar, namely, that spring and not midwinter is the season of trial, not only to Indian *Rhododendrons*, but to very many other half-hardy plants from India, South America, &c. &c. It will be seen that, in January the mean temperature of Darjeeling is but 4 deg. higher than in the counties of Middlesex and Surrey; but, in March, we have the unfavorable difference of 12 deg., and again in Autumn, October for example, our temperature is 10 deg. below that of the "head-quarters" of the Indian *Rhododendrons*, while, as at midwinter, as we have seen, and at midsummer, we have the unimportant difference against us of 4 and 3 deg. respectively. Here we have a solution of the cause of our want of success in cultivating tender plants in the variable climate of Great Britain. Our springs are late, and cold, and changeable. Even this morning, April 18, the thermometer indicated, in the garden of the Royal Botanic Society in the Regent's Park, 9 deg. of frost, within two or three degrees of being as low as it has been at any previous time during the past winter. And, again, the temperature of our autumns differs greatly. October indicates a difference of 10 degrees against us. Thus we see that, while the winters and the

summers of Darjeeling and London differ but 3 or 4 deg., the springs and autumns show a difference of 10 and 12 deg. This accounts for the excitable nature and early growth of many of our half-hardy Indian plants, as well as the tendency of many such to grow to a late period in the autumn.

It is true that plants originally tender will always remain tender, and while there is but small hope that we can ever accustom these glorious tree Rhododendrons to forget the earlier and warmer springs and autumns of the Sikkimhimalaya, and so perform all the necessary functions of growth within our four or five summer months, instead of extending it, as in India, over eight or nine, still there are many and good grounds for hope. The skill of the cultivator has already subordinated to his use the valuable properties of color of the tree Rhododendron of Nepal, and he will assuredly try, nor is he very likely to fail, to extract, from the tender kinds in question, a still richer product. The Rhododendron hybridest has already introduced into the common hardy Rhododendrons the brilliant scarlet of the *R. arbo-reum* of Nepal, and by the aid of this one species there is now an entirely new race of hardy Rhododendrons springing up, which, in a very few years more, will have done for Rhododendrons what the Garths, the Forsters, the Catleughs, the Becks, the Gaineses, &c., have done for the Pelargonium. And all this will be greatly accelerated by the discovery of these new forms of the genus, some, if not all, of which will soon appear among the living plants in the collections of this country.

It is remarked in the preface :—

“It does not appear on record by whom the tree Rhododendron was first introduced into Europe; probably by Dr. Wallich, about the year 1827.”

The editor has here fallen into a slight error; we have reason to know that the late Mrs. Beaumont, of Bretton Hall, received from Dr. Wallich, or at least from Calcutta, seeds of the tree Rhododendron as early as 1815 or 1818, and from which several hundred plants were raised, and in 1824 there were at least forty or fifty plants, forming several beds or plantations upon the open lawn at that place, protected during winter. In 1824, many of these plants were from four to five feet in height, and bushy in proportion. Among these seedling plants, some had leaves fifteen inches in length, and others indicated great variety in the foliage. In reference to this species, it is remarked that, on the authority of Major Madden, Sir James Edward Smith gives the height of the tree at twenty feet, and it is added, “he might safely have doubled that measurement.” Trunks of the tree Rhododendron have been found to girth fourteen feet, at five feet from the ground.

“The Rhododendron ponticum, which inhabits the mountains of Asia Minor, and extends as far west as Spain and Portugal, together with *R. ferrugineum*, and *R. hirsutum*, of the European Alps, *R. Dahuricum*, of Silesia, *R. chamæcistus*, of the Austrian and Piedmontese mountains, *R. maximum*, of the United States of America, and the Arctic, *R. Lapponicum*, were all kinds known to Linnæus, and to the botanical world,

so recently as 1764. The beautiful *R. Chrysanthum*, of Northern Siberia, appeared in Linnæus' Supplement. Gemelin added the *R. Kamtschaticum*, from Okotsh, and Behring's Straits, and Pallas the charming *R. Caucasicum*, from the Caucasian Alps."

We also quote the following graphic sketch of Himalayan scenery:—

"The mountain Sinchul, upon a space of which, looking north, Darjeeling stands, attains an elevation of 9,000 feet, and to the west of it, next Nepal, rises another conspicuous mountain, Zonglo, reaching a height of 10,000 feet. Due north of Darjeeling, at a distance of only 60 miles, the horizon is bounded by the great snowy range, having for its principal feature the peak of Kinchin junga, which has lately been ascertained to be 28,179 feet in elevation, the loftiest mountain yet known in the world."

Dr. Hooker thus describes his first impressions of this scene:—

"Much as I had heard and read of the magnificence and beauty of Himalayan scenery, my highest expectations have been surpassed. I arrived at Darjeeling on a rainy, misty day, which did not allow me to see ten yards in any direction, much less to descry the snowy range, distant sixty miles, in a straight line. Early next morning, I caught my first view, and I literally held my breath in awe and admiration. Six or seven successive ranges of forest clad mountains, among which the giant peak of Kinchin junga rose 20,000 feet above the lofty point at which I gazed! Owing to the clearness of the atmosphere, the snow appeared to my fancy but a few miles off, and the loftiest mountain at only a day's journey. The heavenward outline was projected against a pale blue sky, while little detached patches of mist clung here and there to the highest peaks, and were tinged with golden yellow, or rosy red, by the rising sun, which touched these elevated points long ere it reached the lower position which I occupied."

We understand seeds of these magnificent objects of eastern vegetation are daily expected at Kew. How far and how soon these expectations are likely to be realized, remains, of course, a matter of doubt; but this doubt can only refer to time. That seeds of all those to which we now immediately refer will be received, is as certain as if the plants were already growing on the banks of the Thames; and not only those alluded to above, but many others from the same vast continent, not less remarkable for their novelty and beauty than those now under notice.

Gentlemen and amateurs who are at all interested in the collection and culture of these splendid shrubs and trees of the eastern world, will be delighted not less with the book itself, and the manner in which it is got up, than with the interesting matter which it contains.—(*Gardeners' Journal*, 1849, p. 243.)

ART. II. Domestic Notices.

Worcester County Horticultural Society.—The annual meeting of this Society was held on the 19th of April, and the following gentlemen were chosen officers for the year ensuing:—

Premier.—John Milton Earle, Worcester.

Vice Premiers.—Stephen Salisbury, Wm. Workman, Chas. Thurber.

Trustees.—Clarendon Harris, Meltiah B. Green, Samuel H. Colton, Wm. M. Bickford, Wm. N. Green, Daniel W. Lincoln, Charles Paine, Worcester; Leonard Cheney, Southbridge; Job C. Stone, Shrewsbury; Calvin W. Forbush, Grafton.

Secretary.—George Jaques.

Treasurer.—Fred. Wm. Paine.

Librarian.—Anthony Chase.

A Committee, appointed for the purpose, have in preparation for the press a pamphlet containing the new code of By-laws, a list of the members of the Society, and the Premiums to be awarded at the next annual exhibition, &c. &c.

The prosperous condition of the Society, and the increasing horticultural resources of the County, encourage us to hope that the future exhibitions of this society will not be less frequent or attractive than those of former years have been. If every member will do a little, the combined result will be most gratifying to all.—(*Worc. Spy.*)

Cincinnati Horticultural Society.—The annual meeting of this society was held in April, and the following officers elected for the ensuing year:—

President.—A. H. Ernst.

Vice Presidents.—J. Hoffner, Dr. S. Mosher, R. M. Moore.

Treasurer.—H. Brachman.

Corresponding Secretary.—Geo. Graham.

Recording Secretary.—I. P. Foote.

Mr. Ernst, in taking the chair, addressed the society in a few pertinent remarks. He thanked the members for the honor they had conferred on him, and, with their confidence and forbearance, he hoped to discharge the duties of his office to the approbation and satisfaction of all.

Annual Fair of the New York State Agricultural Society.—*Premiums on Flowers and Fruits to be awarded.*—We are pleased to call the attention of amateurs and cultivators of fruit to the liberal premiums offered by this society for collections of fruit cultivated *out of the State*; so liberal that we hope, not only for the reputation of New England as a fine fruit region, but for the interests of cultivators themselves, a magnificent display will be made from the vicinity of Boston. The west will be well represented at the Fair at Syracuse, and the number of pomologists which will be drawn together there on account of the meeting of the North American Pomological Convention will be large, and afford a fine opportunity for an interchange of sentiments,—an examination of specimens—and the detection of synonyms with which our catalogues are yet too much encumbered.

The following is the Schedule of Premiums as offered by the State Society:—

FLOWERS.

Professional List.

Greatest variety and quantity of flowers,	.	.	.	.	\$ 5 00
DAHLIAS.—Greatest variety,	.	.	.	.	5 00
Best 24 dissimilar blooms,	.	.	.	.	3 00

ROSES.—Greatest variety,	\$ 5 00
Best 24 dissimilar blooms,	3 00
PHLOXES.—Best 10 varieties,	3 00
Best seedling,	2 00
VERBENAS.—Greatest variety and number,	3 00
Best 12 varieties,	2 00
Best seedling,	2 00
GERMAN ASTERS.—Best collection,	3 00
PANSIES.—Best and greatest variety,	3 00
Best 24 varieties.	2 00

Amateur List.

Greatest variety and quantity of flowers,	Silver medal.
DAHLIAS.—Greatest variety,	Silver medal.
Best 12 dissimilar blooms,	3 00
ROSES.—Greatest variety,	Silver medal.
Best 12 dissimilar blooms,	3 00
PHLOXES.—Best 6 varieties,	3 00
Best seedling,	2 00
VERBENAS.—Greatest variety,	3 00
Best 12 varieties,	2 00
Best seedling,	2 00
GERMAN ASTERS.—Best collection,	3 00
PANSIES.—Best and greatest variety,	3 00
Best 12 varieties,	2 00

General List—Open to all Competitors.

Best collection greenhouse plants owned by one person,	Silver medal.
Best floral design,	Silver medal.
Second best,	\$3 00
Best floral ornament,	Silver medal.
Second best,	3 00
Best hand bouquet, "flat,"	3 00
Second best,	2 00
Best hand bouquet, "round,"	3 00
Second best,	2 00
Best and largest basket bouquet with handle,	3 00
For the most beautifully arranged basket of flowers,	Diploma.
Best floral exhibition by any horticultural society, Hovey's Colored Fruits.	

FRUIT.

APPLES.—For the greatest and best variety of good table apples, 3 of each variety, named and labelled, grown by exhibitor, Diploma, and Hovey's Colored Fruits.	
Second best,	\$ 5 00
Third best,	Trans.
The best 12 varieties of table apples,	5 00
Second best,	Trans. and 2 00

The best 6 winter varieties,	\$3 00
Second best,	Trans. and 2 00
For best fall seedling apple, for all purposes, with description of tree, history of its origin, &c. One dozen specimens to be exhibited,	5 00
Second best;	2 00
PEARS.—For the greatest number of varieties of good pears, named and labelled, Diploma, and Hovey's Colored Fruits.	
Second best,	Diploma and 5 00
Third best,	Trans.
For the best collection of first-rate autumn pears, named and labelled,	Diploma and 5 00
Second best,	Trans. and 2 00
For largest and best collection of winter pears, named and la- belled,	Diploma and 5 00
Second best,	Trans. and 2 00
Best collection of newly introduced pears, with a description, &c., Diploma and Hovey's Colored Fruits.	
PEACHES.—Best 12 varieties, labelled,	Diploma and 5 00
Second best,	2 00
Best 6 varieties, labelled,	3 00
Second best,	2 00
Best 12 peaches,	2 00
Second best,	Trans.
Best seedling variety, 6 specimens,	3 00
Second best,	2 00
PLUMS.—Best collection of plums, 6 specimens each variety Diploma and 5 00	
Second best,	3 00
Best 6 varieties of good plums, 6 specimens each,	3 00
Second best,	2 00
Best 12 plums, choice variety,	2 00
Second best,	Trans.
Best seedling plums, with description,	Diploma and 5 00
Second best,	2 00
NECTARINES AND APRICOTS.—Best and greatest number of good varieties, 6 specimens each, labelled,	3 00
Second best,	2 00
Best 12 specimens of any good variety,	3 00
Second best,	Trans.
QUINCES.—Best 12 quinces of any variety,	3 00
Second best,	2 00
Third best,	Trans.
GRAPES.—Best and most extensive collection of good native grapes, grown in open air,	5 00
Second best,	2 00

Best 3 varieties of native or foreign grapes, grown under glass,	
3 bunches each to be shown,	\$5 00
Second best,	2 00
Best dish of native grapes,	Trans.
WATERMELONS.—Best 6 specimens of any variety,	3 00
Second best,	2 00
MUSKMELONS.—Best 6 specimens of any variety,	3 00
Second best,	2 00
CRANBERRIES.—Best peck of domestic culture,	8 00
Second best,	5 00

To be accompanied with a full description of the manner of cultivation, nature of soil, &c.

Any premiums may be withheld in the discretion of the committee, if the samples exhibited are not worthy of a premium.

The fruit exhibited, for which premiums are awarded, to be at the disposal of the committee.

12 volumes of Downing, common edition, and 12 of Thomas's Fruit Cultivator will be awarded by the committee, in their discretion, for choice fruits not enumerated.

FOREIGN FRUITS.

For best exhibition of each variety of fruits named in above lists by persons out of State, Diploma and Trans.

Second best, Downing or Thomas.

Volumes of Downing or Thomas will be awarded by the judges in their discretion, for choice fruits not enumerated.

Liberal premiums for vegetables are also offered, but we have no space to enumerate the list here.—*Ed.*

ART. III. *Massachusetts Horticultural Society.*

Saturday, March 3d, 1849.—An adjourned meeting of the Society was held to-day,—the President in the chair.

The Committee on Flowers reported that a semi-annual exhibition of flowers, &c., should be held in June, and that fifty dollars be appropriated for premiums for the occasion, and that gratuities be also awarded for fine specimen plants. The schedule of premiums was ordered to be advertised in Hovey's Magazine.

The President, the Recording Secretary, J. Lovitt, 2d, C. M. Hovey, J. D. Haggerston, were appointed a committee to prepare and furnish tickets to the members.

On motion of Hon. J. S. Cabot, a committee was appointed to consider the expediency of giving Mr. J. F. Allen a testimonial of their approbation, and thanks for his valuable contributions of early fruits during their exhibitions of past seasons. J. S. Cabot, C. Newhall, and E. Wight were appointed the committee.

A letter was received from Dr. S. P. Hildreth, of Marietta, Ohio, accom-

panied with a painting of some Ohio and other fruits, and the thanks of the Society were voted, and his letter ordered to be published in Hovey's Magazine.

Adjourned four weeks to April 7.

March 24th. Exhibited.—**FLOWERS:** From John Quant, a well grown specimen of *Pimelea spectabilis*, a beautiful New Holland plant. It was about three feet high, and six feet round, containing hundreds of its umbels of blossoms.

GRATUITY.—To J. Quant, for *Pimelea spectabilis*, \$2.

April 7th.—An adjourned meeting of the Society was held to-day,—the President in the chair.

Fifty dollars were appropriated for premiums for the semi-annual exhibition in June; and two hundred dollars for the Library Committee.

Messrs. Macondry, Wight and Copeland were appointed a committee to superintend alterations in the Library Room.

Two hundred dollars were appropriated for the Committee on Publication to complete the Transactions of the Society.

The committee appointed for that object reported that a piece of plate of the value of \$25 be given to J. F. Allen.

The thanks of the Society were voted to Dr. W. D. Brinckle, Philadelphia, and A. H. Ernst, Cincinnati, for contributions of rare scions of fruits.

A. C. Bowditch, W. Underwood, T. R. Marvin, and Rev. T. M. Clarke, Boston, and Dr. B. K. Bliss, Springfield, were elected members of the Society.

Adjourned two weeks to April 21st.

Exhibited.—**FRUITS:** From J. F. Allen, grapes and figs.

VEGETABLES.—From T. Needham, a brace of Hampstead black spine cucumbers.

April 21st.—An adjourned meeting of the Society was held to-day,—the President in the chair.

A valuable Chinese vase was presented to the Society by Geo. B. Jones, and the thanks of the Society were voted for the same.

Dr. E. Wood, Dighton, was elected a member of the Society.

Adjourned one week to April 28.

Exhibited.—**FRUITS:** From Messrs. Hovey & Co., Aberdeen Beehive strawberries, well grown, and filled with fruit, exhibited in pots: proving it to be a fine forcing variety; also one box of fruit of the same variety.

April 28th.—An adjourned meeting of the Society was held to-day,—the President in the chair.

Scions of a new apple were received from Mr. L. P. Grosvenor, and distributed among the members. The thanks of the society were voted, and the description of the fruit accompanying the scions ordered to be published in Hovey's Magazine. [This will appear in our next.—*Ed.*]

Adjourned two weeks to May 12th.

Exhibited.—**FRUIT:** From J. F. Allen, two kinds of grapes. From L. P. Grosvenor, Pomfret, Conn., specimens of a seedling apple, called the Averil apple.

The Committee compared these apples with the Northern Spy, and thought it not equal to the last-named variety. They, however, reserve the expression of their opinion concerning it until further opportunities of testing it have been afforded.

May 5th.—Exhibited. FLOWERS: From J. A. Lowell, fine specimens of *Bilbergia viridiflora*, *Brassia maculata*, *Oncidium flexuosum*, and other plants. From T. Needham, *Azalea variegata*, and cut flowers. From J. A. Kenrick, flowers of *Magnolia conspicua*.

VEGETABLES.—From T. Needham, brace of Barnes's Man of Kent; brace of Weedon cucumbers. From John Quant, brace of Allen's Victory cucumbers.

May 12th.—An adjourned meeting of the Society was held to-day,—the President in the chair.

On motion of Mr. Wilder, it was voted, that the Treasurer, with the advice and consent of the Finance Committee, be authorized to make a sale of stocks, and to borrow a sum of money, not exceeding \$1000, to meet a mortgage due 16th of May.

A mortgage deed of \$10,000 was made by Jos. Bradlee, Esq., and the President was authorized to execute it.

A piece of plate was presented to M. P. Wilder, late President of the Society, and the following correspondence submitted by the Committee:—

Boston, May 1, 1849. Hon. Marshall P. Wilder: Dear Sir,—At a meeting of the Massachusetts Horticultural Society, held in their library room, January 6th, 1849, the following resolutions were passed:—

[Here follow the resolutions that we published at the time.]

And now sir, in compliance with the above resolutions, we present, for your acceptance, a silver pitcher, which we request you to receive as a token of esteem for the zeal and success with which you have served in the cause of horticulture and floriculture while a member of the Society, and more particularly while acting as President during the term of eight years. With sincere wishes for your continued usefulness, health, and prosperity, we are, sir, most respectfully, your friends, BENJ. V. FRENCH, CHEEVER NEWHALL, JOSEPH S. CABOT.

To the Hon. Benj. V. French, Cheever Newhall, Esq., and Hon. Joseph S. Cabot, Committee.

Boston, May 10th, 1849. Gentlemen: The splendid testimonial which accompanied your esteemed favor of the 10th instant, has been received,—also a copy of the Resolutions passed by the Massachusetts Horticultural Society on the occasion of my retiring from its Presidency.

I accept of this rich and beautiful gift with lively emotions of gratitude; not for its intrinsic value, but as an enduring memorial of the confidence and respect so uniformly extended to me during the many years of my administration.

I gratefully acknowledge the kind manner with which you have performed the duty assigned to the committee. Permit me also to tender through you, to the members of the Society, my sincere thanks for this substantial manifestation of their approbation, and to assure them, that I shall ever regard it as a lasting record of relations, which to me have been both pleasant and honorable.

The high appreciation of my humble services, which you have caused to be inscribed on the elegant present, will excite renewed interest for the welfare and success of our noble institution; and I doubt not, that long after we have passed from this world, it will be preserved by my descendants, as a valuable memento of a

society from which I have received distinguished favors, and of endeared friends, with whom I have ever felt it an honor to have my name associated.

Please accept for yourselves, gentlemen, my most grateful thanks, and for the Society the assurance of my highest regard.

MARSHALL P. WILDER.

Adjourned one week to May 19th.

Exhibited.—**FLOWERS:** The Hall was opened to-day for the first exhibition of the season, and a very fine display was made, as follows:—

From the President of the Society, a variety of cut flowers. From M. P. Wilder, a number of fine plants, among which were *E'pactris pulchella*, *Erica ventricosa alba*, *Cavendishii* (!) *breviflora*, *superba*, *hirsuta* and *ovata*; *camellias*, *rhododendrons*, &c., and cut flowers of various roses. From N. J. Becar, Brooklyn, N. Y., a fine collection of *calceolarias*. From J. Breck & Co., *hyacinths* and cut flowers.

From Hovey & Co., a variety of plants, among which were *Maurandya Barclayana alba*, *Begonia parviflora*, double purple and double white Chinese primroses, six splendid new cactuses, and other plants. From Jas. Nugent, a fine collection of cut flowers of *pelargoniums*, roses, bouquets, &c. From G. C. Crowninshield, several varieties of *pelargoniums* and other plants. From A. Bowditch, *Calystegia pubescens*, and other plants and cut flowers. R. M. Copeland, J. A. Kenrick, O. N. Towne, Dr. D. Osgood, and W. Ashby exhibited cut flowers and plants.

PREMIUMS AWARDED.

PELARGONIUMS.—Class I. To J. Quant, for the best six new var. \$6.

Second prize not awarded.

Class II. To John Quant, for best six varieties in large pots, \$6.

Second prize not awarded.

CUT FLOWERS.—To James Nugent, for the best display, \$3.

Second prize not awarded.

CACTUS.—To Hovey & Co., for the best six varieties, \$3.

Second prize not awarded.

CALCEOLARIAS.—To A. Bowditch, for the best six varieties, \$3.

To John Quant, for second best \$2.

CACTUS.—To M. P. Wilder, for the best six varieties, \$3.

Second prize not awarded.

VARIOUS SORTS OF GREENHOUSE PLANTS.—To M. P. Wilder, for the best display, \$8.

To Hovey & Co., for second best, \$5.

HYACINTHS.—To J. Breck & Co., for the best display, \$5.

To R. M. Copeland, for second best, \$3.

ROUND TABLE BOUQUET.—To James Nugent, \$1.

HAND BOUQUETS.—To A. Bowditch, \$1.

GRATUITIES.—To N. J. Becar, for fine display of *calceolarias*, the Society's silver medal, \$5.

To A. Bowditch, for show of greenhouse plants, \$2.

To M. P. Wilder, for show of cut roses, \$2.

To James Nugent, for show of cut roses, \$2.

To Hovey & Co., for fine specimen plants of double purple and white China primrose, \$3.

FRUITS: From Hovey & Co., strawberries, var. Aberdeen Beehive. Messrs. Hovey & Co. have had vines of this kind fully exposed during the past severe winter, and the plants have come out in the finest condition; while plants of many other sorts in adjacent beds have been greatly injured.

From J. F. Allen, Early Black July, Chasselas Bar Sur Aube, Pit-maston White Cluster, White Early, of the French, Grosse Noir de Lorraine; Chasselas de Fontainebleau, Black Hamburg, Grizzly Frontignan, and Ferral grapes; Black Figs of St. Michael.

VEGETABLES.—From Orr N. Towne, two brace of very fine cucumbers. From W. W. Wheildon, Early Frame cucumber. From Thomas Needham, brace of Barnes's Man of Kent; brace of Weedon cucumbers.

May 19th.—An adjourned meeting of the Society was held to-day,—the President in the chair.

A package of seeds was received from the Commissioner of Patents, through the Hon. J. Davis, and they were placed in the hands of the Vegetable Committee for distribution.

Capt. F. W. Macondry resigned his office as Treasurer of the Society, and a committee was appointed who nominated W. H. Austin to fill the vacancy.

Adjourned two weeks to June 2d.

Exhibited.—**FLOWERS:** The President of the Society, J. A. Kenrick, A. Bowditch, and Jas. Nugent, exhibited a variety of cut flowers.

May 26th. Exhibited.—**FLOWERS:** From the President of the Society, Trölius asiaticus, Dodecatheon media and alba, and other flowers. From M. P. Wilder, cut flowers of pelargoniums, among which were Staatholder, Hebe's Lip, Nestor, Sarah Jane, &c.; also roses in variety. From Joseph Breck & Co., tulips in great variety, and other cut flowers. From J. G. Swan, Medford, a variety of indigenous flowers. From Hovey & Co., beautiful scarlet Turban ranunculuses. From P. Barnes, a variety of cut flowers. From Messrs. Winships, cut flowers of a fine collection of shrubs and plants. From A. Bowditch, A. Fisher, T. Needham, and Jas. Nugent, a variety of flowers and plants.

GRATUITIES AWARDED.

CUT FLOWERS.—To A. Bowditch, for beautiful cut flowers, \$2.

To P. Barnes, for the same, \$1.

FRUITS: From J. F. Allen, one dish of figs, grapes, Chasselas Bar Sur Aube, White Frontignan, Grizzly Frontignan, Black Hamburg, Deccan's Superb—in reality a superb variety—bunches large, with berries the size of the Black Hamburg, closely clustered, and slightly tinged with red,—the size of the berry being superior to that of any other of the sweetwater grapes. Mr. A. says the vine is a free grower and great bearer. The committee will test the quality of the grape, at a future sitting, when they will be prepared to speak more in detail on Deccan's Superb.

VEGETABLES: From T. Needham, brace of Young's Champion, (fine,) and Barnes's Man of Kent cucumbers. New potatoes, first of the season. From S. Walker, water cresses, fine.

HORTICULTURAL MEMORANDA

FOR JUNE.

FRUIT DEPARTMENT.

Grape vines in the greenhouse or grapery, will, by this time, have their fruit swelled to such a size that thinning must be commenced immediately, if not already done. Where there are a great number of vines, it is impossible to finish the thinning at once, unless there are several hands; but the work should be proceeded with as rapidly as possible. Go over the vines and top all laterals. Shoulder all the large bunches, which need it, and top up the leading shoot, when the vines have not reached the top of the house. The house should now be kept at a good temperature during the day, but not too high during the night. Damp down the walks twice or three times a day. If the border has not yet been dug, it should at once be done, giving a slight dressing with guano. Cold houses will be about a month later, and the same treatment we recommended last month for the greenhouse will answer. Vines in the open air should be put in order if not yet done: now is a good time to prune, as they will not bleed much at this season.

Strawberries will be in full bearing this month; new made beds should have the runners carefully laid in, until a sufficient number is obtained to make a good row, when the rest may be nipped off.

Trees grafted last month should be looked after. See that they are properly disbudded. *Trees budded* last fall will now require to have the shoots from the young buds carefully tied up to prevent their being broken off.

Pruning should be attended to this month; now is a good time where it has not already been done. Summer pruning may also be commenced the last of the month, by nipping off the side shoots of this year's growth to two buds.

Peach trees in pots should now be removed to the open air to ripen off their fruit, and give it flavor.

FLOWER DEPARTMENT.

Camellias, which have set their buds, should now be removed from the greenhouse to the open air; such as have not yet matured their growth should remain awhile longer.

Achimenes will require another shift into seven inch pots, with plenty of drainage, if large specimens are wanted.

Chrysanthemums, raised from cuttings or layers, should be topped this month in order to make bushy plants.

Ericas may now be turned out of the pots into the open ground in a peaty soil and in a half-shady location. Such as it is not intended to turn out should be repotted and plunged.

Fuchsias will need one more shift into eight or ten inch pots, if large plants are wanted.

Carnations and picotees will now be throwing up their flower-stems, and will require to have them tied to neat stakes.

Neapolitan violets should now be divided and planted out in beds, in rows six inches apart, shading for a few days till rooted.

Japan lilies should all be shifted now, if good specimens are wanted.

Verbenas, salvias, scarlet geraniums, and all other plants intended for beds, may now be planted out.

Perennial flower seeds of all kinds may now be sown in small beds.

Chinese primrose seeds may be planted this month for a stock for next winter.

Abutilon venosum, turned out into the ground, will flower freely all the autumn. Now is the time to put in cuttings for next year's stock.

Erythrina crista galli should now be planted out in the border.

Dahlias should all be planted out by the 20th of the month. Select a good rich soil and manure well. Stake the plants to prevent their being broken.

Roses should now be turned out into the border, where they will flower till frost.

Asters, balsams, and other annuals, raised in hotbeds, should now be planted out in beds or in the borders.

Pelargoniums will now be in full bloom, and should be shaded from the hot sun to retain their beauty.

Euphorbia jacquiniiflora, raised from cuttings last month, should now be potted off, and forwarded in a hotbed.

Calceolarias, raised from seeds, should now be potted singly in small pots.

Rose geraniums should now be headed down, repotted, and plunged in the ground, and they will make fine plants by autumn.

Ascleas should be removed from the greenhouse to the open air; and if they require it, now is the season to repot the plants.

Hyacinths should be taken up the last of the month.

Iris, and other winter bulbs done flowering, may now be placed away on a dry shelf.

Heliotropes should now be propagated for next winter's stock.

Cyclamens should be plunged in the open air in a half-shady place.

Calceuses may be repotted when they have done flowering.

Calceas may now be plunged in the ground in a half-shady place, and their foliage allowed to partially dry off.

Abutilonums for winter blooming should now be propagated from cuttings.

Many Asters may be planted out in beds in the open ground, where they will make a splendid display all summer.

Cyclamens should now have a final shift into eight inch pots, and they will be great ornaments in the greenhouse all summer.

Many plants of many kinds may yet be successfully increased by cuttings before hot weather sets in.

Calceuses should now be headed down, the soil top-dressed, and the pots plunged in the open ground.

THE MAGAZINE OF HORTICULTURE.

JULY, 1849.

ORIGINAL COMMUNICATIONS.

ART. I. *Some Plants of Danvers and Wenham, Essex County, Massachusetts.* By JOHN LEWIS RUSSELL, Professor of Botany, &c., to Massachusetts Horticultural Society.

MR. EDITOR,—As your magazine purports to treat of botany as well as of horticulture, an account of the results of a pleasant day's excursion in our woods, has been deemed, by those who undertook it, a proper offering to its pages. Should you concur in these views, an insertion of this article would oblige and gratify several amateurs of floral pursuits.

The Essex Institute was organized in Salem, Massachusetts, about a year since, by the union of the Essex Horticultural Society with the Essex County Natural History Society. This latter society had, for several years past, offered public exhibitions of fruits and flowers, and many of its members were favorably known, both abroad and through the pages of this magazine, as being successful in this branch of horticultural skill. In arranging the business of the year at the annual meeting, the Essex Institute, on the same liberal plan of fostering a taste for the beautiful and useful, appoints committees, who shall particularly attend to those departments of research assigned to them. Of these, is the horticultural committee, under whose auspices the arrangement of flower and fruit shows will be continued. Another committee may be mentioned, as pertaining more specially to subjects of natural history, under whose inspection and research *the botany of the county* falls. The chairman of this committee, with a party of about a dozen

gentlemen interested in sylvan wonders, selected the 12th of June, to visit several spots well known for their floral riches, and sacred to the memory of the most enthusiastic and zealous naturalist, the lamented OAKES. The day was particularly favorable, sunny, pleasant, and cool, and the scenery proved unusually attractive. Through the attention of Messrs. S. P. Fowler, of Danvers, and of the venerable Dr. Osgood of the same town, the party were successively introduced to many of the rarer plants of this region and of our county, of which some notice will be taken in the order in which they were seen.

The party met by previous appointment at a given spot, and thence proceeded to the locality of *VACCINIUM Vitis-Idæa* (L.) of which GEO. B. EMERSON, in his admirable *Report on the Woody Plants of Massachusetts*, declares, to the best of his knowledge, "occurs in only one spot in" this State, "which is in a pasture in Danvers, where it was found by Mr. Oakes in 1820, or before." This truly *beautiful* little plant is familiarly known as the "cowberry," and in Maine as the "mountain cranberry," affording to the inhabitants of sections of that state an excellent article of wild fruit, scarcely inferior to the common cranberry of our swamps and bogs. I have specimens, gathered at Eastport and at Dennysville, while visiting that region in September, 1844, and well recollect the pleasant condiment, prepared from its berries, which was served on the table. Those familiar with the plant are puzzled to know why it is described in Dr. Gray's "*Botany of Northern United States*," p. 260, as "rather bitter, mealy, and barely edible," or in Mr. Emerson's *Report*, above alluded to, as "austere," the more especially as Mr. E. immediately adds, "in the north of Europe, where it abounds, it is used as the cranberry, but is inferior; formed into a jelly, it is thought superior to currant jelly as a sauce for venison or roast beef, or as a remedy for colds and sore throats."

We were surprised to find this hardy denizen of our northern rocky hills and eastern cliffs snugly nestling in a half-shady spot, among some white birches, (*Bétula populifolia* Arr.) in an open pasture, and extending over a limited area of perhaps half an acre of ground. Its average height seemed to be two or three inches, although stems buried in

the soil might be gathered of double that length. Its flowers were not very numerous, yet fine specimens were selected by those who had never seen it before, and who considered it quite a floral gem. It was just making its new annual growth, and in this condition afforded a favorable opportunity to critically examine its habits. Specimens, collected at the time, have been submitted to such scrutiny by me, and are lying before me. Its flowers are borne on the tips or ends of the last year's growth, six or more in number, each issuing from the axils of colored scales. The shape of the flower is what is termed campanulate or bell-shaped, the corolla monopetalous, divided on the edge into four points. Its stamens are inserted on the corolla at its base, variable in number, seven or more, each furnished with a flat filament of a pinkish hue, and covered with downy hairs. The anther is tubular, opening at the tip by an irregular fissure. The extreme beauty of the stamens can only be appreciated by the use of the microscope. A most elegant cellular tissue of elongated hexagons compose a net work, making up the tubes of the anther. Every part of the surface of the anther is studded with blunt spine-like bodies, of a transparent single cell, more perceptible on *the edges* of the anther. Such blunt spines invest, indeed, the filament of the stamen; while superadded, the surface of this part of the stamen is beset with flat and long, crooked hairs, each of four or five joints, while the surface of each of these hairs is also beset in the same manner as is the anther. The style or pistil is simple, curved, and inserted on the centre of the germ. The color of the corolla and calyx is of a pale pink, which, contrasted with the dark green and glossy foliage, adds much to the charm of this unique species.

The entire plant, when growing vigorously, appears in dense and crowded patches, composed of prostrate woody stems, described as "angular," though nothing of the sort appears on our specimens; on the contrary, they are round or cylindrical, as are also the short branches which bear the foliage. Where the wood is old, the epidermis peels away and remains in shreds, and forms irregular fissures, which may give rise to such a statement. The foliage, as has been observed, is of a deep-shining green, each leaf of an obovate

contour, with its margin revolute or turned back, while beneath may be noticed occasional dark spots, and likewise minute bristles. The dark spots seem to be merely a discoloration of the cellular tissue of the skin of the lower portion of the leaf, which is of a paler green than is the upper surface. The bristles are in reality, (though seemingly simple black bristles,) elaborately executed club-shaped organs, issuing from thickened greenish specks, and inserted on the very surface of the epidermis. The entire contour of each of these club-shaped organs is very similar to what are called *antheridia* in mosses, and, apart from their situation and habit, would scarcely be distinguished from them. The pedicel or stem of the club seems to divide into two longitudinal parts as the little organ matures; but I think this is merely a deception, and arises from a furrow, which deepens between the two rows of parallel cells, which make up the pedicel. At an early stage of the growth of the young leaf a discoloration of the transparency of the cells takes place, just at the base of the club where it is connected with the pedicel, and something like a joint is the consequence. If this is so, each bristle is two-jointed; if not, then its simplicity of structure, in this respect, allies it the more closely to the *antheridia* of the flowers of mosses. On the young leaf the bristle is as hyaline as glass, but on the mature leaf it becomes of a rich golden brown color, though apparently black to the naked eye. I scarcely have met with a microscopic subject which has afforded me more gratification than the structure of the *cowberry*, as specified above.

I know not whether any attempt has been made to cultivate this interesting plant, but should think that the Rock-work would admirably suit its habits, and am sure that no one would regret any necessary pains or trouble to secure its presence in his grounds.

The topographical history of the subject of our present observations we received on the spot from the lips of Dr. Osgood, who accompanied Mr. Oakes when this individual plant was first noticed by him. It was, we were assured, after a long day's ramble, which had proved so far unprofitable, and when regretting their want of success, they were mutually gratified by such a change of fortune. It certainly

is not a little remarkable, that no account has ever been given of the occurrence of *VACCINIUM VITIS IDÆA* in any other part of Massachusetts, which, if existent, seems to have never fallen under the eye of the botanist.

Leaving so pleasant a spot, our attention was next directed to a secluded sheet of water, called Cedar Pond, on the margin of which the elegant *ANDRÔMEDA POLIFOLIA* L. (*Rosemary-leaved Andromeda*) luxuriates. This graceful shrub was just passing out of flower, so that no good specimens in that condition could be obtained. Mr. Emerson informs us (*Report*, p. 372) that "it was for this modest and delicate plant Linnæus selected the poetical name of the genus." I would refer the reader to the extract Mr. E. makes from Linnæus's "*Tour in Lapland*," as well as to a description of the plant from Mr. E.'s pen. A belt of these floral water nymphs encircled the little lake, mingled with the rich flowers of the Side-saddle flower, (*Sarracenia purpurea*,) which were in their perfection. As we turned our steps from this vicinity, which cost the more adventurous a wet foot and a plunge-bath over boots, I noticed, on the trunks of the white cedar, (*Cuprèssus thuyoides*,) several interesting lichens, especially the *Cetrària juniperina*, var. *virèscens* *Tuckerm.* in fine condition. *Hypnum Blandôvii* occurred on the soil beneath the trees, and pools of standing water, secured from speedy evaporation by the abundant growth of several kinds of sphagnum, afforded subjects of infusorial life in its many forms. We were assured by Mr. Fowler, that *Kálmia gláuca* had been gathered by him in this region, which I should deem favorable to its growth.

From Cedar Pond, and its floral treasures, we proceeded to another and larger expanse of water, which, like the locality of Andromeda, occurs in Wenham, and known as Pleasant Pond, affords, on its borders, several curious plants. This pleasant little lake is happy in its name, for nature seems to have set it like a jewel amid emerald woods and gently swelling hills. From one of these elevations, covered with old hemlocks, (*Abies canadensis*, *M.*) we could discern the *village* of Wenham in the distance; while the rattling of the steam car announced that busy art was not far from us, bearing, through these green woods and plashy-

brinked meadows, the wonders of its herculean toil. At our feet were seen *Goodyeria pubescens*, (*R. Brown*,) and *Pyrola elliptica*, (*Nutt.*,) *P. chlorantha*, (*Swartz*,) and the rarer (*P. uniflora* *L.*) now separated from its sister plants and bearing the name of *Moneses uniflora*, (*Salisbury*,) a *solitary* in habit, and *single* in its delicate rosy flower, while the crimson berries of *Mitchella repens* diversified the scene. In one of the outlets, the Indian Rice, (*Zizania aquatica* *L.*,) has been found, and on the borders of the thickets we gathered plants of *Platanthera fimbriata*, (*Lindley*,) or the large purple-fringed Orchis, *Orchis grandiflora*, (*Bigelow*,) which were carefully removed with the roots to expand its blossoms in some sheltered garden. Several other species of the Orchis family were noticed, and the *Clintonia borealis*, (*Raffinesque*,) was found in abundance, just in full blossom. *Calla palustris* is also a denizen of these swamps, though no specimen occurred. *Saxifraga pennsylvanica*, (*L.*) which Dr. Gray calls "a homely species," was seen rising to *considerable consequence*, if altitude of growth be any proof; and, from its merits on this and on the score of its *general good looks*, was considered worthy of transportation by one of our company.

The morning had now wasted away to high noon, and, according to previous agreement, our party repaired to a convenient room, where an agreeable collation greeted many a hungry and expectant devotee to the sterner wants of our physical natures. Refreshment being had, an informal meeting was held for two or three hours, in which the chairman of the committee endeavored to interest the auditors with remarks on the physiological characters of the lower plants, as typified in the simpler Algæ, and as exhibited in modified action through the higher forms. Starting from the simple cell as the lowest form of organized vital matter, he showed how the cryptogamous plants furnished an almost infinite series of beautiful arrangement, and shadowed forth the higher and more elaborate organs of the phanogamous. With the assistance and coöperation of Thomas Cole, Esq., a student microscopist, and well known for his devotion to the minutiae of nature, he was enabled to exhibit sections of fungi, lichens, mosses, &c., in which the

cellular tissue was seen entering into every part, and developed in the *asci*, *spores*, *sporules*, and the like. Some exhibitions of the larvæ of water insects, of animalcules, through one of Oberhäuser's microscopes, modified by the employment of Ross's unrivalled object-glasses, from Mr. Cole, closed the meeting.

A similar exploration has been set on foot for a future day, when other sections of Essex County will be critically examined. It is hoped that, among other objects of value, the finer native plants may become better known, and some species, scarcely ever seen, may yet grace the garden and become subjects of horticultural interest. Should any thing of value in this way occur, or this notice be deemed worthy your pages, something more of the sort may follow.

South Hingham, June, 1849.

It gives us exceeding pleasure to publish the above most interesting paper by Prof. Russell; and now that our native plants are beginning to be better appreciated, the valuable information which it contains cannot be over-estimated. Could the flora of every county of Massachusetts be as thoroughly investigated as that of Essex is likely to be, through the exertions of the Essex Institute, the locality of every beautiful and desirable plant would be well known, and amateurs would thus have the opportunity of transferring such as are the most attractive to their gardens.

What among the whole range of our many native shrubs possesses the exquisite beauty of that floral treasure, the *Andróméda polifolia*? The Cape of Good Hope scarcely possesses a heath which will surpass it in loveliness. Its little clusters of tiny bell-shaped flowers, of the richest pink, wreath the delicate stems; and they are enriched by a glossy foliage, whose under-surface presents that silvery shade so admired in the well known *abele*; add to this its easy culture in any rather moist soil, and it may truly be said to be without a rival for attractiveness. Bigelow and other botanical authors tell us, when describing our native plants, where some of them may be found, but in such brief terms that we are left almost as ignorant as if nothing had been said. For instance, in Bigelow's *Plants of Boston*, *Kálmia latifolia*,

it is stated, grows in "Woods, Gloucester, Princeton, &c." Now if, in any locality, any particular plant is very abundant, as that of *Andr meda polif lia*, at Wenham, by knowing that locality the spot can at once be reached, and the plants secured without a fruitless search, perhaps of a day or more.

We trust we shall have further accounts from Mr. Russell, of other excursions by the committee of the institute, and we think we speak the views of our many readers, when we say, they will be found among our most valuable communications.—*Ed.*

ART. II. *The Averill Apple, its Origin, &c., with a Description of the Fruit.* By L. P. GROSVENOR, Pomfret, Conn.; in a letter to Samuel Walker, Esq., President of the Massachusetts Horticultural Society. *With an Engraving of the Fruit.* By the EDITOR.

The following account of the Averill apple was communicated to the Massachusetts Horticultural Society, by Mr. Grosvenor, of Pomfret, Conn., a gentleman who is not only well acquainted with all the best apples, but has an extensive orchard of the finest varieties. The society voted that Mr. Grosvenor's letter should be published in our magazine. We are highly gratified in presenting the same to our pomological friends, and can confirm the good opinion expressed of this new fruit. By the kindness of Mr. Walker, we received one of the apples, and annex to Mr. Grosvenor's description, which is very complete, an outline engraving of the fruit, (*fig. 26.*)

DEAR SIR,—I wrote you, some days ago, about a seedling apple; having an opportunity, I now send a sample for the inspection of the committee on fruits of the Massachusetts Horticultural Society. The original tree is growing in an orchard of ungrafted trees, belonging to Dea. Lewis Averill, on the farm where the den is situated in which Putnam killed the wolf. The ground has been in grass many years, and the tree is covered with moss. A few years ago the

fruit was discovered to be valuable. I have several trees, four years from the graft, that have made good growth, and I expect will soon bear well every other year.

The apple appears to keep remarkably well, and I hope this variety will prove as valuable as any other now known. I propose to call it *Averill*, and annex a description.—*Respectfully, your most obt. servt., L. P. Grosvenor.*

Pomfret, Conn., April 27, 1849.

TO SAMUEL WALKER, Esq.

Size, large : Shape, oblong, slightly ribbed : Skin, pale red and bright red, in stripes, on a greenish yellow ground, with purple dots : Calyx, closed and slightly sunk : Stem, short and

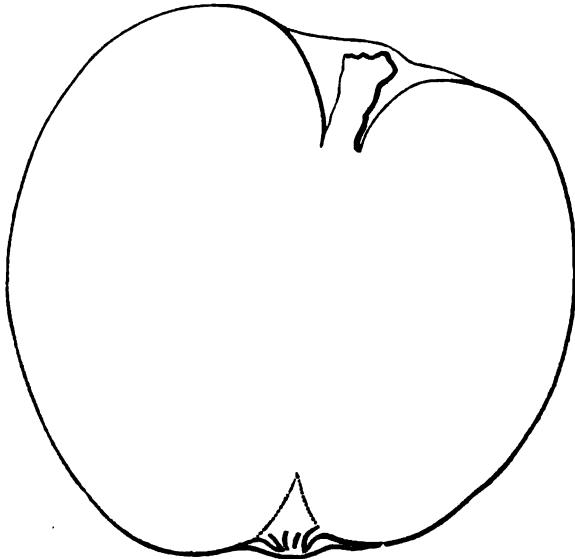


Fig. 26. The Averill Apple.

stout, not projecting beyond the base, set perpendicularly in a middling-sized ribbed cavity : *Flesh*, light yellow or yellowish white, with some green ; crisp, pleasant, rich subacid flavor : *Seeds*, large, chestnut color : *Core*, hollow. Ripens middle of March and keeps till June. Tree bears every other year.

Our specimen was in the most perfect preservation, as sound as a Baldwin or Northern Spy; and it will prove a most valuable late apple, taking its place with the two above sorts as late keepers and superior fruits.—*Ed.*

ART. III. *Notice of a New Plum, called the Drap d'Or of Esperin, with an Engraving of the Fruit.* By the EDITOR.

THE late Major Esperin, of Belgium, according to the accounts in the Belgian Horticultural journals, devoted much of his time to the production of seedling fruits, more particularly of pears and plums; and several of his varieties, especially of the pear, are said to be very valuable acquisitions, superior to any that have been raised since the productions of Van Mons, and fully equal to many of the best produced by that celebrated cultivator. It is also stated, and we presume correctly, that the fruits of Major Esperin have all been produced without any regard to cross fertilization, or by successive generations, as practised by Dr. Van Mons; but are what may be termed "chance" seedlings. Josephine de Malines and Suzette de Bavay are said to be two of the very finest pears. Of pears, however, we shall speak another time. Our object now is to give some account of one of Esperin's seedling plums.

DRAP D'OR (of Esperin) is the name given to this plum in the *Flore des Serres* of Van Houtte, where it is represented in a beautifully colored figure, a copy of which we annex, (*fig. 27.*) and the following descriptive account accompanies the drawing:—

For this fine variety, we are indebted to that intelligent cultivator and celebrated Belgian pomologist, Esperin, (the Major.) It was raised from seeds, by him, in 1830, and produced its first fruit in 1844; and we are indebted for its preservation to M. Louis Berckmans, d'Heyst Opden-Berg, an amateur and distinguished cultivator, who has communicated, in part, the details we have concerning this plum. The fruit is stated to be one of the best of its kind; the

flesh, which readily separates from the stone, surpasses in flavor that of the *Mirabelle Double*, or *Drap d'Or*, which it approaches in its general form, and from which it has been

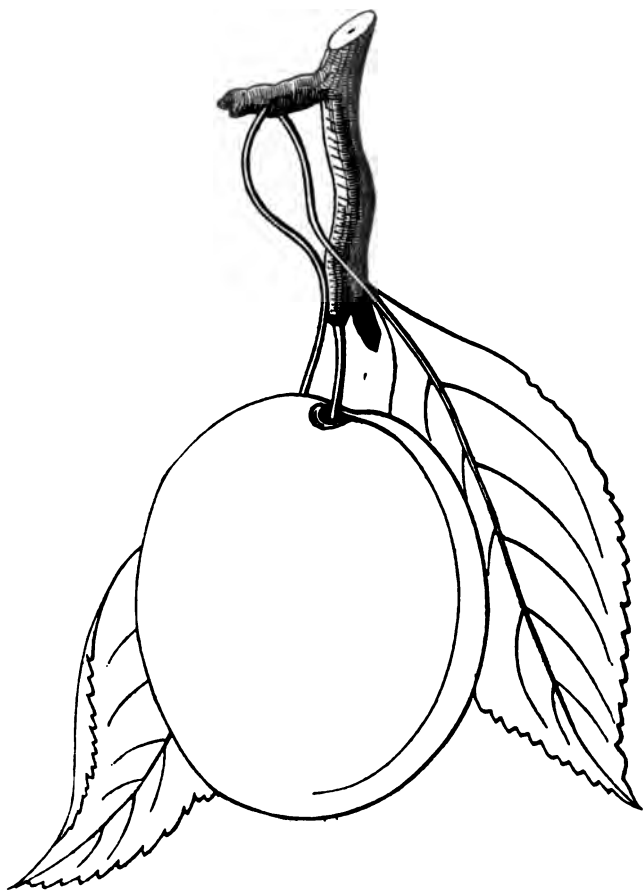


Fig. 27. Drap d'Or of Esperin.

named. It ripens in the latter part of August; its form is oval, regular, from ten to twelve centimetres in circumference, about the middle of the fruit; the skin is of a beautiful yellow, veined and reticulated with green, under its transparent epidermis. It resembles much, according to M. Berckmans, the *Washington*, but is different in its flavor, more

regular in its form, with a larger stone, entirely separating from the flesh.

The tree is vigorous, of handsome form, and an abundant bearer: the young wood is reddish: the leaves are oval, elliptical, attenuated at the base, pointed at the summit; with short petioles, little downy beneath, serrated on the edges.

The trees were first disseminated from the establishment of Van Houtte, last autumn, at the high price of fifty francs (ten dollars) each; and if equal to the account given of it, it will prove a decided acquisition to our catalogue of plums. It is described in the Belgian catalogues as the *ne plus ultra* of plums.

ART. IV. *A few hints on Summer Pruning Pyramidal Pear Trees.* By the EDITOR.

WE have already, more than once, promised our readers the full details of the method of summer pruning pyramidal pear trees, as practised by ourselves on our specimen trees, of which we have upwards of a thousand, nearly one half of them in bearing,—or rather would have been but for the severe winter,—for many of them were literally covered with flower-buds in April. Not only have we lost the opportunity of fruiting many new sorts which have never yet borne in the country, but the opportunity, also, to test the accuracy of many doubtful sorts for at least *one* year, and, more than all, the chance of securing some accurate drawings of a few of our finest specimen trees in FULL FRUIT, that our pomological friends might have the pleasure of seeing a pyramidal tree five years old in the full vigor of growth and productiveness.

These reverses, beyond our control, are our apology for not giving our article in the June number as we anticipated, for we had intended it should be as complete as it was our ability to make it. Not only did we intend to show *how* summer pruning should be performed, but to give a *DAGUERREOTYPE* illustration of a tree which had been so pruned, and in full *bud*, just as it would appear after the frosts of autumn had shorn it of its foliage. This we promise yet to do.

And now, to give some aid to those who have addressed us many inquiries upon the subject, we propose making a few remarks, that they may lose no time in getting their trees into that preparatory state which shall render them abundantly fruitful another season.

We shall take the trees as they now appear, the first week in July. If the soil is good and the trees healthy, and no summer pinching off has yet been done, the shoots will have grown from six to eighteen inches long, according to the kinds, soil, manure, &c. Finding them thus, we proceed to prune them:—

If the winter pruning was judiciously done,—and we have not room to speak of that now,—each shoot will have made two or more *new* shoots from the ends of the branches which were shortened back. If the last year's shoots are examined, it will be found that generally but few, if any, of the eyes have pushed, in consequence of the sap being directed to the young terminal shoots. If then this upward tendency of the sap is not checked, none of the buds below will break, and no fruit spurs be formed; for we take it for granted that it is well known the pear, with few exceptions, only bears upon *spurs* on the old wood. Pinching off the tips of the young wood has a tendency to make the eyes break, though not always, and this is the benefit to be derived from summer pruning; but merely nipping off the shoot will not do, for if, on some kinds, it is nipped off too soon or too short, the terminal eye breaks and goes on growing as before. Here is where the amateur is in error, for he imagines that all should be pinched off alike, and, to his great disappointment, often finds his labors of no effect. The information that is wanted to prevent this it is almost impossible to convey in an article; much may be learned, but constant practice and observation alone will ensure entire success. So far, however, as we can guide the cultivator we shall endeavor to do so.

Supposing that there are three terminal shoots, as first stated; if the tree is moderately vigorous the first step is to nip off (or cut, if too hard to pinch with the thumb and finger) the two side shoots to two eyes, unless one or both are wanted to fill some vacancy in order to make a symmetrical head; at the same time the leading shoot may be

allowed to go on growing for a week or two longer. In the course of a few days, if the eyes on the *old* wood are examined they will be found greatly swollen, and many of them ready to break; if from any cause this is not observed, then the terminal shoots should be nipped off,—not to two eyes,—but merely the tip end, to check the growth; this will be found, in most cases, to effect the object; the eyes below will break and short spurs will be found.

After a while the side shoots, as well as the main one, will break again, and, if the spurs are well filled, they may be allowed to grow some length; for, if stopped too quick, it will sometimes have the tendency to make the spurs,—which would, under most circumstances, form flower buds,—break again, and make merely a second growth. The eye must be kept upon the old wood, and, if the spurs do not fill up well, continue to check the growth of every branch not wanted; and, on the other hand, if the spurs show signs of pushing, at once discontinue pinching.

Thus every branch should be gone carefully over. There is no set time for performing the operation; it should be done at any and all times, whenever the state of growth requires it; and this is affected by many causes. Generally, however, from July 1 to August 1, is the most important period. We have pruned some of the stronger growers and refractory sorts as early as June 5th, but they were upon the pear and grew more rapidly than upon the quince. Trees upon the quince do not require so much pruning as those on the pear.

The main objects are, to keep the centre of the tree open to the free circulation of air, for without this the leaves will not keep up their elaborative process, by which the fruit buds only can be formed; to let the terminal shoots of all branches grow so as to form a perfectly symmetrical head, only pinching off the tips as they require it, and cutting back all which are not wanted, and to nip off or cut in all side shoots to *two* eyes. These operations duly attended to, with good judgment, cannot fail to accomplish that desired purpose,—the formation of an abundant supply of fruit buds.

Once a week, at least, the amateur should go over his trees, from July 1 to September 1.

**ART. V. *Notes on the American Aloe.* By W. SAUNDERS,
New Haven, Conn.**

There are few greenhouses where a specimen of the *Agave Americana*, or *American Aloe*, is not to be seen in some form or other, and, from the prevailing idea that it only flowers once in a century, it seldom experiences any thing but the roughest kind of treatment. It is undoubtedly a plant of very slow growth, and requires a long time to attain that size and strength necessary for flowering; but there is no reason whatever for believing that its period of inflorescence is only at the lapse of a century, as it entirely depends upon the treatment the cultivator is pleased to give it.

Few plants present a nobler appearance when in bloom. The flower stem rises to a height of from twenty to thirty feet, thickly set with branches, which are covered with thousands of fully expanded flowers at one time, in which there is secreted a copious supply of nectar, having rather a disagreeable scent, and of an adhesive, gluey texture, and I will long remember the varnishing I received when inspecting one in full bloom, by unwittingly touching the flower stem. Such a floral beauty is of great interest, and no doubt there are numerous plants in this country that would flower with a few years' kindly attention and proper treatment; and the small amount of trouble they require, will be amply repaid if the cultivator have the pleasure of bringing them into bloom.

I have succeeded in bringing them into flower under the following routine of culture, and I have no doubt others will find success equally certain by following something like the same course of treatment.

If the plant has been a number of years in the same soil it will be advisable to turn it out of the pot or tub; examine the roots and clear away as much of the old effete soil as possible, without damaging any of the healthy roots. If the ball of earth has been considerably reduced, a pot or tub of the same size will probably answer for the purpose of repotting it, as it is not advisable to have a great mass of fresh soil about the roots at this time. They seem to thrive well in a mixture of rough, fibry healthy loam, and peat earth,

well mixed and pulverized for some time previous to using. Before potting with this, add about one quarter part of broken charcoal and sand. The early part of spring is the best time for performing the operation. Clean pots or tubs should be used and well drained. This is of great importance, as the roots will soon decay if the water does not pass freely off. After potting, give a good watering and stand the plants in the warmest part of the greenhouse. Water must be very carefully applied for some time until the plant begins to make fresh roots. About the middle of June, they do better out of doors in an exposed situation, where they will have plenty of sun and heat, always observing that water is liberally supplied. It would be advantageous to plunge them in saw dust, tanners' bark, or some such material, for the roots are apt to get roasted when exposed to the intense rays of the sun; it would also save trouble in watering. Towards the end of the season gradually lessen the supply of water, and keep them all winter any where out of the reach of frost, and nearly dry. They will require no water at all unless subjected to a very arid atmosphere, under the influence of artificial heat.

The following spring shift again, and continue the same course of treatment, and when, on account of their size, it is not convenient to shift, the annual growths should be encouraged by judicious applications of manure water; this, however, should never be applied unless the plant is in perfect health, and growing freely.

New Haven, June, 1849.

ART. VI. *On the Cultivation of the Pansy.* By Mr. TURNER, Chalvey, near Windsor. *With Remarks* by the Editor.

THE pansy, in its present improved state, is one of our most beautiful plants; blooming nearly the whole season, and at the simplest treatment, it commends itself to the care of every amateur cultivator. With the hope of interesting our floral friends in the more extensive culture of this floral

beauty, we have copied the following article from Beck's *Florist*, which is especially minute in all the details of growing it, either for the amateur's own inspection or for exhibition. We trust it will be the means of bringing the pansy into more general notice.—*Ed.*

Few plants are held in more general estimation than the heartsease. Of easy culture, hardy, and blooming nearly all the year round, it is to be found alike in the cottager's and in the nobleman's garden, where, from the diversity of its beautiful colors and its charming form, it equally ornaments the quiet corner or the bed appropriated to its cultivation. At the floricultural exhibition it is a looked-for favorite; and those who have been in the habit of attending the metropolitan and provincial shows cannot but have been struck with the great advance made in the last few years in the form, substance, and distinctness of the new varieties. Nor has the improvement effected been made in the flower only; great improvements have taken place in the mode of cultivation. The intention of these papers is, to place before the amateur the benefit of our experience in the growth of this little pet, promising the readers of *The Florist* that we have no nostrums to recommend, but a few simple rules easily carried into practice, the adoption of which will be attended with success. The treatment of plants for exhibition, and of those for the flower-beds, requires but little variation; the only difference being, that the former need a little more stimulating with manure, and the young shoots cutting back, so as to allow the strong leaders to receive the whole vigor of the plant, and by this means to increase the size of the blooms. For both purposes the plants must be renewed annually, either by cuttings, layers, or parting the root, or they will soon degenerate in size and color. Of the different varieties we shall speak in due course, adding a descriptive list, and explaining the merits and faults of the flower in the amateur's estimation.

PRACTICE FOR JANUARY AND FEBRUARY.

There will be but little to do in the first of these months, if those plants for early blooming are well established in

beds, and those for pot culture protected in cold frames. The beds, if not already done, should be gone over without delay; peg down all loose long branches, and cover them with light fine soil, leaving the point of the shoot and foliage above the surface. It will be equally advantageous to place a little similar soil round those plants of upright growth. This will steady them in bad weather, and help to secure the plants against frosty winds, which often prove destructive; and to complete their security, place a small glass or flower-pot over each plant during such weather, and on frosty nights, removing them as soon and as often as the weather will permit.

Those in frames must be looked over often. Clean them of dead leaves, and stir the surface of the soil; give as much air as possible on all favorable occasions, and keep them moderately dry.

Those intended for blooming in pots under glass should be repotted finally about the first of February. A 7-inch pot will be the most proper and useful size; but as some grow much more vigorously than others, a size larger or a size smaller may be used, according to the habit of the plant, but the principal part should be in a 7-inch size. As pot culture is becoming every season more general, and is by far the best and most certain mode of obtaining early bloom, we shall give full directions under this head.

The soil should be turfy loam, well decomposed, mixed with rotten stable-manure and leaf-mould. To half a barrowful of each of the latter, with two and a half barrows of loam, add coarse sand or grit from the washing of a stream, in quantity according to the nature of the loam. This compost should be well mixed during the summer, and occasionally turned over, looking for wireworm, &c.

We must suppose that in the first week in October a selection had been made from the beds of young plants of such as are intended for blooming in pots, which should be short and healthy; that they were potted in small pots, in soil above described; and that they were placed where they had protection from heavy rains. We must also suppose that the remainder of the soil has been preserved for the final repotting, and been well frosted in the interval, and kept in a

tolerably dry state. Now this will obviate the necessity of shaking the mould from the roots, which plan would be preferable to making use of soil differing from that which the plants had originally grown in. A part of the soil should be shifted, and that which will not pass through the sieve mix with as much rotten manure, and place a little of the latter on the drainage, which should be good. The pot should then be filled sufficiently to receive the plant.

When repotting, remove the top part and exterior of the ball of earth from the plants, which has generally become sour, and shake them down firmly by striking the pot on the bench; but they are not to be pressed so hard by the hand as when potting carnations. Finish with the fine sifted mould on the top, this will secure perfect drainage, and give the pots a much neater appearance. Water sparingly for a fortnight or three weeks, and then only when the weather is mild. Give all the air possible, as before, and keep the plants close to the glass. Turn the plants round occasionally; in fact, do every thing that will help to keep them dwarf, and of a dark-green color. Fumigate if greenfly appears on the plants, which will not be the case should the weather be such that the lights can often be drawn quite back. The surface of the soil will require scratching over as often as it has become hard from watering. Top-dress the pot with rotten manure, mixed with a little loam, about the last week in

MARCH.

This is often a trying month for pansies. March winds, accompanied with frost, frequently destroy more plants than the rest of winter. Therefore at this time we counsel protection in severe weather. We by no means recommend such covering as would make them tender, and cause them to start into growth out of season. As they will naturally commence growing early in this month, greater vigilance must be observed to cover the plants at the approach of frost, if early bloom is required, as the buds will suffer in a very young state.

Those to succeed the first bloom should now be planted out from the store pots, in beds that have been ridged up all the winter.

Pansies will grow in any soil, but thrive best in a good mellow sandy loam, made tolerably rich with good rotten manure and leaf-mould : whatever the soil may be naturally, add that which will bring it nearest to the above. For instance, if the soil is a close adhesive loam, mix in plenty of a light nature, with coarse sand ; good stiff loam may be added to great advantage, if the soil is light,—the pansy being a plant that cannot stand drought, such as would be experienced with light soil in dry weather.

In choosing a situation for this plant, it is most desirable to select one free from the sun for a few hours in the hottest part of the day ; this will cause the blooms to keep their color a much longer time.

If large blooms are required for exhibition, the distance from plant to plant should be fifteen inches for strong-growing varieties ; ten inches will be sufficient for those of an opposite character, and that seldom cover but very little space. “Exquisite,” “Ariadne,” and “Miss Tarrant,” are of this class, and should be planted in a separate bed, otherwise such rude-growing kinds as “Mary Jane,” “Rainbow,” and others, will run over them. Two thirds of the distance above named will be sufficient if grown for effect in the garden. Pluck off any flowers that may appear before the plants are established in the ground.

A few cuttings may now be put in to advantage, and, when struck, should be planted in a north border, which plants will flower all the summer in good color, if the situation is a proper one, and be the means of providing a succession of bloom from March until November, as the stock propagated during the summer months will bloom freely and fine all the autumn.

Cuttings will strike throughout the whole year, and should be taken as often as they can be found on choice valuable kinds.

The most troublesome time to manage cuttings is during the hot weather ; they are most easily struck in March and the autumn months.

For autumn, winter, and spring striking, we make use of pots, pressing them firmly and closely to the edge, using sandy soil, with *plenty* of drainage ; but for summer propa-

gation we prefer a shady border, which should be well drained, and prepared so that worms cannot disturb the cuttings. They should be protected from heavy rain and from exposure to the sun; but if they are shaded, like most other cuttings, they will most assuredly damp off. All depends on the situation, which should be *light without sun*. Another difficulty to contend with at this time, arises from harsh drying winds. We use hand-lights and small frames, so that both heavy rain and wind can be effectually kept from them. However, not an hour should be lost in keeping them quite open in favorable weather.

We must caution the inexperienced grower to avoid the common error that nine out of ten fall into. Success will not so much depend on making the cutting, which is a very simple affair; but whether for pots, or the border, be careful not to make the hole deeper than the cutting is intended to be inserted, and press the earth round it until it is *quite hard*. We do not recommend layering; it should only be resorted to with those flowers that are shy in throwing up young wood. The tops of long shoots may be struck in this way, that are too large for cuttings.

The soil of those beds which have had plants in them all the winter should now be loosened, preparatory to their being top-dressed with good rich rotten manure, which should be put on when the beds are in a dry state. A good layer of manure laid on in this manner answers two purposes. Its strength will be washed down to the roots by rain and watering, and will prevent the blooms from being splashed by heavy rains. This last operation cannot be performed so early as this in every season, as it would be injudicious when the beds are in a wet state; and the first week in April would answer very well. At the same time fill up any vacancies that may have occurred during the winter.

APRIL.

This is perhaps the most exciting time of the year for the amateur pansy grower. Buds of some new wonder, or popular old favorites, will be fast maturing; and those who intend to exhibit will be still more interested in the development of those plants they have been watching and nursing

for months past. It cannot be denied but that early blooms of well-grown pansies are charming in the extreme; their rich velvety appearance and freshness of color make them peculiarly attractive.

Those in pots will now require to be gone over frequently with the water-pot, being careful at the same time not to give much water to plants of slow growth; the constitution of some varieties being very different to that of others, and requiring judgment in this respect.

Any seed that may have been saved during the autumn should now be sown in pans, the more early in the month the better, and placed in gentle heat. Care must be taken in watering after they are up, otherwise they are liable to shank off.

Look over the beds of autumn-planted seedlings, as many will have been loosened by the frost, and will require pressing down.

If our readers are enthusiastic growers, they will not object to follow our recommendation, and carefully to hunt by candlelight for slugs, if their beds are troubled with that pest. How many, on visiting their pansies in the freshness of an April morning, have found their buds and flowers disfigured for want of such precaution!

MAY.

This is the month when the pansy-grower will be fully repaid for all his previous trouble. Those in pots and in the autumn-planted beds will be in full bloom throughout this month; and if the plants are such as they ought to be, from the grower having adopted the treatment we have recommended, the blooms will be large and fine, unless cold winds, or frosty nights, should make them curled and rough, and so disfigure the best kinds. Hence the reason of our recommending pot-culture, as a certain plan of obtaining good blooms at an early period of the year.

Those in pots will now require watering more freely, that is, if the plants have done well, and made a vigorous growth; at every alternate watering we give them weak liquid manure. Watering, as well as the other operations enumerated, must, in a great measure, be left to the skill and judg-

ment of the cultivator, to perform earlier or later than the time specified in these general directions.

Water in the morning until the weather has become settled and warm; when it is so, the afternoon or evening will be preferable.

We make a point of going over the plants with the water-pot once a day; but in drying weather, we run our eye over them two or three times a day, and water as many as have become dry; for which purpose a pot of liquid manure is kept standing by the frame. If only one plant requires it, it does not go without.

These little details, when fully carried out, cause the blooms from some gardens to be so much finer than the same kinds from other places; so much so, as scarcely to be recognized as the same varieties.

By the middle of this month the weather is usually so warm, that the frames containing the plants in pots should be reversed, so as to face the north, which will help to keep them cooler, and the most favorable spot should be selected to this end. *As before recommended, keep the lights pulled back on all occasions when the weather will permit:* but previous to an exhibition, much care and attention will be necessary, as more flowers will be made unfit for competition by friction from the wind than from any other cause. It will be evident that the larger and finer the blooms are, the more liable they will be to get blown about. Yet, to keep the lights constantly on, would soon spoil the succession-blooms, by drawing the plants.

The same directions will answer for watering the beds; they will not, of course, require it so often.

When in flower, the plants should not be watered over head, particularly if blooms are likely to be required at no distant period.

The principal exhibitions for this flower will take place about this time; to succeed at which, care must be taken of blooms that will be in at a given day. To do this, a little shading will be necessary. Those that are in the habit of growing dahlias, carnations, or pinks, for exhibition, will have ample means for this purpose. Shades made of tin, pasteboard, canvass, or small handglasses, will be found

equally useful. Never shade the entire bed with canvass or other material; it would bring one fine head of bloom for a week or so, but from that time the blooms would degenerate in size, with drawn-up plants. We need not point out the difference between the pansy and the tulip. The succession of bloom required from the former, and not from the latter, accounts for the difference in the mode of shading. But with the shades we first described, a single bloom can be protected without injury to the plant itself, or those around it. Remove the shade a few hours in the morning and evening; it will invigorate the bloom selected, and keep that part of the plant from drawing.

Much good will result from having some tall upright stakes, or any pieces of wood sufficiently high, placed close to the bed on the south side, to which fix some very thin canvass during the heat of the day. This will not draw the plants, as the canvass we use is sufficiently thin to admit the air passing through it, yet has the desired effect, by keeping the blooms in color a longer time.

Six days before a show will suffice to look round for blooms likely to be good when fully grown; but the blooms so selected must not be shaded until a day or two later. This is supposing that the weather is warm; but should it be otherwise, extend the time, as the number of days a bloom will keep will depend on the weather. Those of good substance will of course keep the longest.

Put in as many cuttings as can be procured in this month; it will answer two purposes; strengthen the plant in the main shoots, and thereby increase the size of the blooms, and at the same time ensure a stock of all the leading kinds before the large plants begin to die off from the heat. Entire beds have been known to shank off during a very hot summer; and all we can say on this part of the subject is, that the further the pansy is removed from its original state by high cultivation, &c., the more they shank off in this manner.

Therefore, if our recommendations are attended to, by propagating as much as possible during the spring, the loss, comparatively, will be but trifling, as the young stock is not liable to go off from the same cause; and when once we get through the summer months, they generally grow like weeds.

To keep up a succession of large blooms, pluck off all small or otherwise inferior blossoms. Those that grow for competition only, often destroy the whole of the bloom for a few days to ensure a fine head, and a good choice for any particular occasion. At all times keep the plants clean of dead leaves. The side-shoots, and those that continue to break up from the root, must be kept down when large blooms are indispensable, whether they are required for increase or not.

JUNE.

The operations in this month will be very similar to the preceding one. The weather having become more hot, the cuttings will require closer attention; and the first thing to be done, on observing a fine flower in the seedling-bed, should be to put in a few cuttings; as we have before shown how little notice a plant gives before it dies, during the heat of May and June. Plants, that appear to be full of health and vigor in the morning, will be down before midday, as if they had been severed with a knife. On examining them, it will be found that the spine is black and diseased to the extremity of the shoots. Many fine seedlings have been lost for want of this precaution.

Examine the choice kinds, and gather what seed is sufficiently ripe, or the sparrows will very likely save you that trouble. When gathered, it should be placed so that it can be covered with glass or thin canvass; otherwise, at the bursting of the pods, many good seeds will be lost. Of course it must not be covered down air-tight, as it will require all the air it can have to ripen and dry it off.

JULY.

Many of the cuttings, put in from time to time, will have taken root. Those for autumn-blooming may be planted out at once; and a cool spot selected, and prepared with plenty of coarse sand, to transplant the remainder into for stock-plants. Keep the surface of the soil removed between those cuttings in process of striking, and clean the cuttings of all dead foliage. It should be borne in mind, that the situation

of the pansy ought to be the first object ; and if there is a part of the garden cool, and rather shady, but of inferior soil, we advise the cultivator to make that soil suit the plant, which will be found more easy than to make the situation.

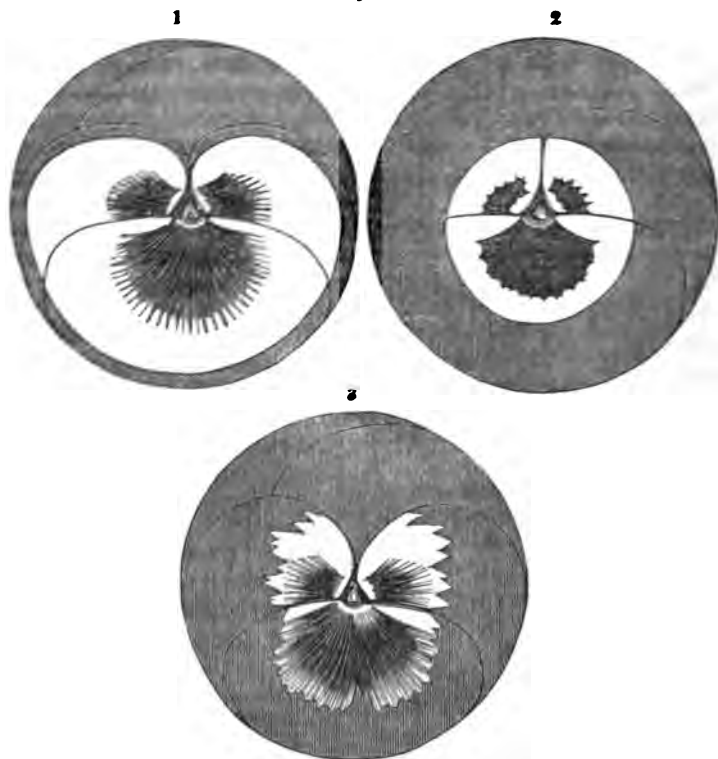


Fig. 28. The Pansy.

POINTS OF PERFECTION IN THE PANSY.

The seedling-beds will now be daily showing new faces. This is therefore an appropriate time to state the properties which constitute perfection in the pansy, as it may be of service in selecting the most promising to be grown another season, which is necessary to prove their constancy. The above woodcuts, (*fig. 28,*) 1 and 2, will give the best idea of what is most prized as regards shape. It will be seen that the outline should be quite circular ; the petals even on the edges, and flat ; the face of the flower smooth, (*viz.* free from

crumple,) otherwise the best-formed variety will have a coarse appearance.

In the outline, we have many varieties that approach very near to our standard; the deficiency generally being in the lower side of the bottom petal.

It must have been observed, that every step we have taken towards attaining a perfectly round pansy, so much less is there seen of the top petals. This arises from the increased size of the side and bottom petals, which, obliterating the deep indentations in the outline, have encroached upon the visible portion of the top petals. The side petals should meet at some distance above the eye, that the marking may be perfect; the effect of this will be apparent by comparing 1 and 2 with 3.

The next point to notice is the centre or eye, which should be radiated or solid, see 1 and 2. If the former, the lines or rays should never run through to the margin, as in No. 3; if the latter, the color should terminate abruptly.

A most desirable point is, that the ground-color should be entire; whether white, lemon, or deep yellow, it should be the same in all the petals. Many of the yellow-ground flowers have a tendency to be of a deeper shade in the bottom petal; this is a fatal defect in show varieties. The colors should be distinct, whether bright or deep, well defined, and not joining the ground-color by a watery or indistinct edge. In No. 3 it will be seen that the oblong shape of the ground-color is very objectionable, as it gives the flower a long appearance, although the outline is perfect. It is better that the ground-color should follow the outline, as in No. 2. No. 3 is also given to show the common appearance a flower has when the inside of the margin is uneven; in this point flowers are greatly improved.

Selves of any shade should be dense and rich, with a bold dark eye, and the more glossy the surface the better. By comparing Othello or Hall's Rainbow with Diamond, this will be evident. Richness of surface is, of course, essential to all of them; we abound in good dark Selves, but are very deficient of whites and yellows. We may also mention, that great improvements have been made in yellow-ground flowers compared with white-ground varieties.

Seedlings without substance, if they possess the other requisite qualities, should be discarded. Size is indispensable in show-flowers.

ART. VII. *Floricultural and Botanical Notices of New and Beautiful Plants figured in Foreign Periodicals; with Descriptions of those recently introduced to, or originated in, American Gardens.*

ABU'TILON BEDFORDIANUM.—This is a new and very pretty species, quite distinct in its foliage and flowers; the leaves are large and roundish, measuring six or eight inches in diameter; and the flowers, which are considerably larger than the old striatum, are borne in clusters on long axillary stems, and are of a pale dull yellow, striped and veined with light brown. It is not quite so free a bloomer as the striatum, but its broad and ample foliage, its stately habit, and the delicate shade of its flowers, render it a desirable and pretty plant. It is now in fine flower in our collection.

LONICERA SEMPERVIRENS, var. BROWNII.—Under this name we have cultivated a new and beautiful variety of the scarlet honeysuckle. The flowers are a little different in shape from the old scarlet, and of a darker shade, and the stem on which they are borne springs from the centre of a flat circular leaf, giving it a neat appearance. The foliage is handsome, and deeply tinged with reddish brown. It is a fine acquisition to the honeysuckle tribe, and should be in every collection. It is of easy cultivation, and is perfectly hardy.

GROOM'S HYBRID LILIES.—At the time of our visit to Mr. Groom's establishment near London, in the fall of 1844, of which we have given a full account, (Vol. XI. p. 165,) we saw, besides his superb collection of Japan lilies, a small bed of lilies which he had produced by hybridization between *L. bulbiferum* and *atro sanguineum*. They had just gone out of flower, but Mr. Groom praised them so highly that we purchased his whole collection of eighteen kinds, at the round price of £5. After our arrival home, for fear they might not prove hardy in our climate, we cultivated them in pots, and

when, in the following year, they came into bloom, we were so much disappointed in their beauty that we neglected them,—so much so, that a portion of them were lost; and what remained, in the autumn of 1846, we turned out into the border, to take their chance with other common bulbs.

From that time until the present month, (June,) they have been entirely forgotten; they were neither protected in winter, nor encouraged to grow in summer, and the names of some of them were lost; but, to our great surprise, they have now bloomed with a splendor which at once shows their great worth, and the just estimation in which Mr. Groom held them. We had observed that last year, (1848,) the London Horticultural Society had awarded Mr. Groom a Certificate of merit for an exhibition of some of the flowers, but we attributed this to their rarity and novelty rather than their merit. We can now appreciate the justice of the award.

These lilies grow about eighteen inches high, and the flowers are erect, in the way of our common *philadelphicum*, but they appear in immense clusters of eight or ten, individually very large, and of various shades of color, from pale red to a fiery vermilion, the petals more or less spotted with maroon or dark brown, making a rich brilliant display, especially when grouped with the lighter-colored species and varieties. Altogether, we consider them as great acquisitions to this most showy tribe of hardy bulbs. The names of some of them are *Vulcan*, *Nabob*, *Voltaire*, *Atlas*, *Titian*, *Louis Philippe*, *Napoleon*, *Rembrandt*, *Duke of Devonshire*, &c.

NEW CALIFORNIAN ANNUALS.—Since the expedition of the lamented Douglass to California, and Drummond to Texas, but a very limited number of new annuals have been introduced. To the labors of Douglass, all lovers of flowers will be ever indebted, for without the Columbia River and California species, sent home by him, our gardens would present but little of the variety which now renders them so interesting throughout the season. The golden *Chryseis*,—the delicate *Clarkias*,—the gay *Leptosiphons*,—and the azure *Nemophilas*, are sufficient of themselves to beautify an ordinary garden.

Mr. Hartweg, in his late expedition to Mexico and California, has introduced several new and pretty annuals, and, from his success, which was, however, greatly marred by the

troubles of the Mexican war, we have no doubt there yet remains many fine things in store for the industrious collector who shall follow him. We only wish that our own government would move in this matter. Mr. Breckenridge, who accompanied the Exploring Expedition, would be the enterprising botanist who should fully investigate the *botanical* riches of our newly-acquired territory. To many individuals, we are sure he would bring treasures of greater value than the golden sands of the Sacramento, or the precious ores of the Sierra Nevada.

The following are the new annuals brought home by Mr. Hartweg, which have flowered in the garden of the Horticultural Society, and are described in their *Journal*:—

Pogogyne multiflora Benth.—A dwarf labiate annual, growing five inches high, with lilac flowers. A pretty dwarf species, which, if sown in May, will flower from August to November. Found in Sonoma.

Lupinus affinis Agardh.—Grows six inches high, little branched. Flowers in whorled racemes, silky bright deep blue, with a broad white spot in the middle of the standard. It remains a long time in bloom. Found in the woods near Monterey.

Monardella undulata Benth.—Grows nine inches high, little branched. Flowers in stalked terminal heads, bright violet, surrounded by pale, broad, hairy, roundish, involucreal leaves. A hardy annual, flowering in June, and remaining a long time in bloom. Found in fields near Monterey.

Neruritta atractylodes Hook. and Arnott.—A hardy annual, growing six inches high, but only of botanical interest. Found in fields near Monterey.

N. pubescens Hook and Arnott.—A showy and pretty species with grayish blue flowers. Found in Sonoma.

N. maculata Benth.—The finest annual of all Mr. Hartweg's seeds. It has the habit of *insignis*, but has white flowers with a deep violet blotch on the end of each lobe of the corolla. It requires the same treatment as *N. insignis*.

Phacelia elaeagnifolia Benth.—A prostrate succulent plant, with the habit of *Linnanthus Douglasii*. The flowers are pale blue or white. It is a tolerably pretty annual, requiring little culture.

ing the same treatment as *Nemóphila*. Found in the Sacramento valley.

L. álba Hartweg.—Of similar habit of *L. rósea*, but with white flowers. It thrives well in a damp situation, and blooms for a long time.

At another time, we shall notice some of the shrubby and perennial plants and bulbs which Mr. Hartweg found in California.

MISCELLANEOUS INTELLIGENCE.

ART. I. General Notices.

Wistaria sinensis.—On each of the rafters of the principal roof of the conservatory here, is trained a single shoot of this plant, the flowers of which are usually produced in great prodigality, more especially at the first period of blossoming, when it exhibits a magnificent appearance. Viewed from either end of the house, the whole roof presents an unbroken mass of large bluish purple clusters, of the softest tints, which are rendered even more delicate by their being produced under glass. The bunches of flowers have been unusually fine with us this season, and from absence of much sunlight they have been in beauty since the beginning of April. When trained on walls or buildings in the open air, on different aspects, the season of flowering is in consequence of longer continuation. On a southern aspect here it has been in flower about a fortnight; whilst on an eastern exposure, the blossoms are only just expanding, and they will remain in flower for a long time, in consequence of being shaded from the fierce rays of the mid-day and afternoon sun. It is worthy of remark, that whilst the blossoms on a southern exposure have suffered very considerably from the effects of the severe weather of last month, those on an eastern aspect have sustained no damage whatever. Grown on arches in particular situations, or trained to imitate a shrub on a nicely kept lawn, the effect in either case is pleasing, or if it is allowed to ramble over a specimen of *laburnum*, its delicate flowers mingling with the brilliant yellow of the *laburnum* produce at once variety and contrast.—(*Gardeners' Chronicle*, 1849, p. 342.)

Verbena Pegs.—The following plan may be found a less troublesome mode of procuring pegs for verbenas, &c., than the ordinary custom of cutting hooked pegs out of old besoms or bundles of fern. Get a bundle of the unpeeled thin ends of the willow twigs, about from one to two feet long, from the basket maker's, and cut them into lengths from four to six inches. When your plants require pegging, you have only to take your basket full of these little sticks, and, bending them in the middle, they will be found to answer perfectly. Keep the bundle of twigs with the thick end in water, to preserve their toughness, until they are wanted to be cut up. Any basket-maker will furnish a bundle of these ends, enough for a large gar-

den, for about 6d. ; and if you make it 1s. he will probably add a quantity of nice white peeled sticks for tying up plants to.—(*Ib.* 1849, p. 342.)

Oxalis floribunda a bedding plant.—Those who have only seen this oxalis treated strictly as a greenhouse plant can form little conception of what a showy thing it is when planted out of doors in masses. In planting it out, however, a little discretion is necessary. Avoid any situation where, from the position of high trees or buildings, the rays of the sun would be excluded from it during the greater part of the day ; for its flowers will not expand fully in the shade, or in very dull weather. From its dwarf neat habit, no difficulty will be experienced in finding a situation for it ; but the most appropriate one is, on raised beds among stones, on rockwork, or round the margin of beds containing taller plants, where it forms an excellent edging during summer. It must be admitted, however, that this pretty little plant is not propagated with that facility with which verbenas, petunias, salvias, and many other bedding plants are ; but when a stock of it is once obtained there is no further trouble, for the same plants can be made available many years in succession.

When the season is too far advanced for the flower garden to be any longer an object of great interest, *oxalis floribunda* ought to be taken up and potted, in any light sandy soil, and placed on a shelf in the greenhouse, where it will be safe from severe frost or damp in the winter. In taking up the old plants, a quantity of short shoots will sometimes be found growing round their necks, close to the ground ; these ought to be cut off close to the stem, and planted in sandy soil, in store pots half filled with crocks, after the manner of cuttings. As these shoots seldom exceed one and a half inches in length, (not including the leaves,) let them be inserted into the soil their whole length, and watered, in order to settle the soil about them ; and if placed in any close pit until they emit roots, they will form an excellent stock for planting out the following summer.

Though the *oxalis floribunda* cannot be depended upon as being sufficiently hardy to stand our winters out of doors without protection, nevertheless, it is by no means so impatient of a low temperature as some might imagine. I have known it, when planted on a pile of stones laid against the south side of a building, with a little light soil thrown over them, but allowing some portion of the larger stones to stand up above the soil, to resist all the vicissitudes of three winters in succession without any protection whatever, unless the projecting stones can be considered as such. And in this case its condition was not such as we frequently witness in half hardy plants under such circumstances,—a mere existence throughout the winter, and in spring so much injured as only to be fit to be thrown away ; for these, in the intervening summers, flowered in the greatest profusion.—(*Ib.* 1849, p. 324.)

Dahlias.—As the plants advance in growth, they must be tied carefully to stakes arranged so as to preserve a natural appearance ; avoiding, on the one hand, a tight broom-like fashion, and, on the other, an awkward severance and, as it were, dislocation of the branches. Unless regular tying is attended to, some unlucky wind will tear away a large portion of the plant.

Pruning must not be neglected, the operation being regulated by the habit of the flower. If liable to become coarse, the knife must be little used, but if the tendency of the flower is to diminutiveness, it may be applied with advantage.

As it is of the utmost importance to keep up a regular moisture at the root, mulching is recommended in hot weather, i. e., from the time of planting till September, or nearly through the whole season of growth. I have for several years been foiled in my attempts to keep evaporation from proceeding too rapidly, by the birds, who have scraped away, in the early morning, the grass or other covering placed around the plants at night. Last year, I covered the mulching with twigs, but from some cause I could not discover, they still persevered, and rendered my efforts futile. This year, I intend to plant deeper, and gain a mulching by an extra thickness of mould between the surface and the root. I am not aware that this plan will have any disadvantages, while it will allow of a small depression being made to retain water. The principle to be remembered is, that artificial watering is, to some extent, an evil, as it hardens the soil and carries its fertilizing properties out of the reach of the plant. Whatever means, therefore, can be adopted to retain moisture, are, so far, favorable to a healthy development of vegetable growth. The best growers recommend frequent waterings with a fine rose over the foliage, when the sun is off the plants; besides the general benefit, it is said that the moisture prevents, to some extent, the attacks of earwigs.

The mention of that foe to florists, just alluded to, reminds us of the disappointment so often felt, when, having succeeded in getting a good bloom, our labors are neutralized by the fine teeth or mandibles of earwigs, ruining in a night the finest specimens. How can they be guarded against? No doubt by a greater acquaintance with the habits of the insect, and a more diligent warfare against it in all its stages of growth. But as this radical eradication of the pest is not to be looked for, we can only indicate the modes of checking their propensities, in some particular case. They may be caught by hundreds and killed, by bean stalks placed among the foliage, or small pots half full of moss on the tops of the stakes. But the mischief is then partly done, as will be manifest from the color of their internal juices, which are yellow, crimson, or orange, according as the flower they have been eating is of either of those hues. It was once thought sufficient to prevent their ascent, by water-pans, or by wool tied around the stem; but it is now known that earwigs have wings, and are consequently not dependent on their feet for access to their food. That they can fly is undeniable, but that they exercise the power much may be doubted. I never saw one on the wing, nor even preparing for flight, although I have been out in the nights of summer repeatedly, and watched their movements with a candle. I am inclined to think the faculty of flying is but rarely used, and that, therefore, while traps should be placed to catch them, means should also be taken to prevent their ascending to the dahlias. It is known they dislike cotton or wool, which entangles their feet, and perhaps some oily substance in addition would effectually repel them. The wool should be

tied lightly around the whole stem and the stake, so as to render ascent impossible without passing over it.—(*Ib.* 1849, p. 325.)

Vines.—A generally successful cultivator of the vine has not unfrequently to lament the failure in the setting of some of the superior sorts of grapes, such as the Muscat of Alexandria, the Tottenham Park Muscat, Black Morocco, West's St. Peter, &c. On the Black Morocco, this season, producing a profusion of unusually large bunches, there is only one on which the berries are even partially well set; the rest are composed of small stoneless berries with here and there a single one swelling off; the excepted bunch happened to be placed upwards towards the glass. An unusually large crop of the St. Peter grape is likewise composed of similar defective bunches. The same complaints are frequently made by other cultivators, and the sorts of vines alluded to have been discarded by many, owing to the failure. Will you favor the writer with an explanation of the cause of this defect in the setting of the grapes, and suggest any mode of treatment likely to remedy it. The temperature of the house has been usually from 75° to 80° during the time of blossoming, with as much moisture as possible [Oh!] produced by water thrown on the hot iron pipes, syringing being discontinued during that period, air being freely admitted. Nothing can exceed the strength and vigor of the vines, the stems of many of 15 years' growth being as large as is usually found at double that age, great attention having been paid to the original composition of the border, which has since been largely supplied with decomposed animal matter.—*Clericus, Devonshire*. [As much moisture as possible! There is the mischief. Vines cannot set their flowers in moisture.]—(*Ib.* 1849, p. 325.)

Antirrhinums.—It is often asked can the capabilities of these flowers ever enable them to enter the rank of florist flowers; and if so, what position will they be able to elevate themselves to among these too-frequently overruled and rigidly-disciplined favorites. In reply, I would state that the snapdragon flower, as regards markings and colors, is endowed with powers and capabilities which, with attention and judgment in cross breeding and culture, will ere long prove its right to range prominently amid the best of Flora's productions. A very brief period has as yet been devoted to the improvement of the antirrhinum; and yet the rapid advancement the better and more attractive properties of this flower have made in this short space of time encourages me to hope that we may expect greater distinctness and regularity in its stripes and markings than in the carnation or the tulip themselves. This statement is based upon the fact that *A. Youngii*, a chance seedling, is a flower regularly marked and invariably having equal coloring on each side. Last year, out of eight or ten bushes of it planted in different parts of my garden, I did not discover any difference in any one of the flowers, which, however, are by no means good as to form. I believe that the old *reticulatum*, and the varied ones like Ibrahim Pasha, will sustain the same fact with regard to invariability of marking. A right standard of perfection by which to judge of this flower is yet, however, a desideratum.—(*Ib.* 1849, p. 325.)

Summer Treatment of Hardwooded Greenhouse Plants.—Every one

knows the danger of allowing any of the hard-wooded plants from Australia or the Cape to flag. Neglect them only for one day during a dry summer, and their tissues become contracted, the leaves and tender tips droop, and then the greatest care the gardener can bestow will not be sufficient to recover his favorites, whose roots are confined within the narrow compass of the potter's handiwork. Nature has not endowed plants with the power of locomotion, but by successional layers of organized matter the roots become elongated, and in pot cultivation soon reach their prison walls, and of course are there ill situated to withstand drought. But see similar plants in their native country,—they there possess a luxuriance of growth and profusion of blossom that calls forth the admiration of every traveller.

The heath is a plant which is well known to be very impatient of drought, but look at it as I have done on the mountains behind Cape Town, where heat and drought far exceeds any thing of the kind in this country. Again, witness the vegetation of New South Wales, where the majority of our most lovely greenhouse plants is to be found. There I have seen the *Banksias*, the lovely *Epacris*es, *Chorozemas*, *Boronias*, *Pultenzas*, &c., flourish among rocks and thrive upon sandy plains exposed to the parching sun, and for a long period without a drop of rain; but their roots are there at liberty to pursue what course they please, and so they penetrate to a great depth, where they are kept cool and moist during the driest seasons. That king of the Australian forest, the noble *Eucalyptus*, whose size astonishes every traveller, occupies immense tracts of strong marl, broken only by an occasional gully, where I have seen the princely palm, from 80 to 90 feet in height, and the most lovely ferns the Cryptogamic botanist could desire. Again, round the margins of swamps I have delighted in the sight of the strong-growing *Acacias*, such as *armata* and *dealbata*, many of the *Melaleucas*, *Eutaxias*, and the humble *Blandfordias*. On such trees are numerous parasitical plants, not the least curious of which is the *Acrostichum alciorne*, which is perfectly at home on the top of the *Casuarina*, appearing at a distance like some huge bird's nest. Planted there by the hand of nature, and watered by the dews of heaven, it attains a size unequalled under artificial cultivation.

Looking round on the various forms of vegetation in distant countries, I thought their captive brethren were often harshly treated. For instance, how frequently do I see them taken from the greenhouse and placed behind some wall, hedge, or high trees during the summer months, thus depriving them of part of the sun's power at the very time when they ought to receive every ray of his light; for, it should be remembered, that the brightest of our summers cannot for a moment be compared with those of the countries of which these plants are natives, and where the majority of them stand fully exposed, ripening and hardening their systems to an extent which enables them at the approach of winter to withstand degrees of cold that would surprise many people. I have often thought that nature's laws would be more perfectly fulfilled if, on their removal from the greenhouse, these plants were placed where they could receive the full benefit of the sun, while the pots might be plunged in sand or the common soil. By so doing

the roots would be kept cool and moist; comparatively little water would be required, and the plants would acquire a solidity that would enable them to bid defiance to damp and mildew in winter, when they could also bear a few degrees of frost with impunity.—(*Ib.* 1849, p. 212.)

ART. II. *Foreign Notices.*

FRANCE.

French Bouquets.—The *Marchands de Bouquets* are a very numerous and thriving fraternity in Paris. In all the principal streets, and particularly in the arcades and passages near the theatres and places of public amusement, are to be found their attractive shops, where nosegays may be procured at from ten sous to twenty francs throughout every day of the year; a still more numerous, yet humbler class, sell in the public streets, and at the railway stations, roses, violets, carnations, camellias, in fact, every flower in its natural season from January to December at from one to five sous ($\frac{1}{2}d.$ to $2\frac{1}{2}d.$). The amount spent by the Parisians in this way is almost incredible; thousands of persons obtain a living by selling these halfpenny bouquets; to understand this, it must be borne in mind that the manners of the continent are different from those in England; that in catholic countries almost every day is the “*Jour de fête*” of some saint, and that in France it is the custom for every one to present flowers, either growing or cut, to their friends on their birth-day or “*jour de fête* ;” so universal is this, that a duchess gladly accepts the friendly homage, and the meanest inhabitant of a garret feels neglected, if not insulted, without it.

To meet this demand, there is a distinct and numerous class of florists, occupying small gardens from a quarter to one acre of ground, adjoining the city walls in the Faubourgs St. Denis, Menilmontant, Charonne, Marceau, and St. Jacques, whose sole occupation is the cultivation of these flowers; each has his “*specialité*” which he grows upon a large scale and can afford to sell at a cheap rate. Everything is done upon the most economical plan; to save expense, the plant-houses are built two, three, or four feet below the surface, exactly like spanroofed pits; the front or south lights are glass, the back or north is generally covered over with deal boards; this enables them to cover the whole thickly over with leaves in winter, and effectually prevents the frost from entering; there is not one in fifty of these houses ever warmed by any other means; fuel is very expensive in Paris, and it would not answer their purpose to be at the expense of fire heat. Tan is abundant, and procured at a reasonable price; it is everywhere used in these gardens for bottom heat.

With these florists you do not find any large collections or general stock; few grow more than ten or fifteen kinds of plants to bloom in succession, that their energies may be concentrated upon one thing at a time, and, as might be expected, what they do is done well. The “*specialité*” of one

consists of camellias, azaleas, roses, orange trees, and hard-wooded plants ; another of ericas, epacris, pelargoniums, &c. ; another of violets, pansies, carnations, &c. Thus an immense quantity is raised. It is no uncommon thing to find in one of these little gardens 10,000 or 15,000 camellias ; in another, as many roses or crassulas. I am quite sure that for Midsummer day (Fête de St. Jean), there are not less than 60,000 or 70,000 plants of *Crassula coccinea* cultivated about Paris. The white chrysanthemum, especially the new white anemone flowering varieties, are now largely cultivated for cut flowers in December. The *Rose du Roi* (crimson perpetual,) is almost the only one sold in the markets. I have seen it in bloom during every month of the year ; its delicious fragrance, fine color, form, and habit, render it decidedly more useful than any of the China and Provence kinds. The *Indica* minor, alba, and coccinea, are also extensively grown for the *Marchands de Bouquets* ; they are, with the violet, chrysanthemum, and camellia, their grand resort for the winter.

I have often been struck with the difference between the bouquets of London, Paris, and Brussels ; in London, it is no uncommon thing to see beautiful *stanhopeas*, *oncidiums*, and other orchids, forming part of a bouquet ; in Brussels, also, you see some fine rare flowers, but nothing of the kind is to be seen in Paris. In the latter town, in general, they are composed of the common flowers of the season ; they are, however, nevertheless very pretty,—the secret lies in the grouping. Most decidedly the French understand harmony of color and tasteful arrangement better than any other people ; it is thus that they make up an elegant nosegay for a mere trifle ; even in November, December, and January, you may always procure them at a moderate price ; this is no doubt, in part, owing to the climate, but in no little degree to the means used in retarding or prolonging the bloom. During those months, there is a plentiful supply of violets, cyclamens, epacris, *laurustinus*, white chrysanthemums, fairy roses, Chinese primulas, oranges, ericas, and camellias ; and as the national colors are ever dominant with the Parisians, they make up very pretty tricolor bouquets of fairy roses, violets, and *primula sinensis* or white chrysanthemums.—(*Gardeners' Chronicle*, 1849, p. 356.)

ART. III. Domestic Notices.

New Haven County Horticultural Society.—The nineteenth annual exhibition of this society will be held on Tuesday, Wednesday, and Thursday, the 25th, 26th, and 27th of September next, at New Haven. Liberal premiums will be awarded for flowers, fruits, and vegetables.

Northwestern Pomological Convention.—Some of the western papers propose a horticultural convention, to be held at Chicago in the coming autumn. We have no doubt it would be attended with the best results. Such is the extent of our country, that it is next to impossible to carry fruit and attend conventions at a very great distance. A meeting of the kind

proposed would be of great service to the pomologists of Iowa, Wisconsin, Illinois, and Missouri.—*Ed.*

Vermont Fruit Grower's Convention.—A notice has already been issued for holding a convention at Montpelier, on the 18th of October next. This has been decided upon by the State committee appointed at the North American Pomological Convention. Communications and specimens of fruit are requested to be sent to the care of Daniel Baldwin, Esq., of Montpelier, who will take charge of them. The notice is signed by the committee, of which C. Goodrich, Esq., is chairman.—*Ed.*

ART. IV. *Albany and Rensselaer Horticultural Society.*

The exhibition of the society, on Wednesday the 20th June, presented a fine display of fruits, flowers, and vegetables. The reports of the several committees are annexed, in which a description of the articles on exhibition may be found. The attendance of visitors, taking into consideration the overpowering heat of the weather, was large. The flowers were very tastefully arranged upon a new stand designed by Mr. J. M. Lovett, which added much to the display. The increased interest manifested in the exhibitions of the society, is very encouraging.—B. P. JOHNSON, *Secretary*.

FRUIT.—The Committee on Fruit report that there were exhibited by B. B. Kirtland, Greenbush, six varieties of strawberries, viz, Burr's New Pine, Iowa, Sciota, Columbus, Burr's Old Pine, and Ohio Mammoth. By E. Prentice, Mount Hope, five varieties of strawberries, viz, Ross Phoenix, Early Virginia, Iowa, Hovey's Seedling, and Stoddart's Alpine. By Dr. J. Wilson, Bethlehem, four varieties of strawberries, viz, Early Virginia, Black Prince, Bishop's Orange, and White Alpine. By Wm. H. Dewitt, Ross Phoenix and White Alpine strawberries. By V. P. Douw, Wolven Hook, Ross Phoenix, and Iowa strawberries, and Green Citron muskmelons, grown under glass. By E. C. McIntosh, Hovey's Seedling strawberries.

By J. Rathbone, Kenwood, Cincinnati Pine, Early Virginia strawberries, and May Duke cherries. By Wm. Cooper, Guilderland, Early Virginia strawberries. By J. Wilson, five varieties of strawberries, viz, Crimson Cone, Columbus, Alice Maude, Burr's New Pine and Aberdeen Beehive, (two plants of which new variety were exhibited, growing in pots, and heavily laden with fruit.) By Stephen E. Warren, Troy, Iowa strawberries. By E. H. Pease, Hovey's Seedling and Boston Pine strawberries. By Dr. Herman Wendell, four varieties of strawberries, viz, Aberdeen Beehive, Swainstone Seedling, Boston Pine and Iowas. By Luther Tucker, Bethlehem, six varieties of strawberries, viz, Royal Scarlet, Boston Pine, Crimson Cone, Ohio Mammoth, Old Hudson, and Hovey's Seedling. By J. M. Lovett, Swiss Home, Bethlehem, Iowa strawberries.

PREMIUMS.

For the best and most extensive collection, not less than half a pint of each variety, to E. P. Prentice, \$3.

For the second best with same requirements, to B. B. Kirtland, of Greenbush, \$2.

For the best and finest flavored variety, to B. B. Kirtland, for Burr's New Pine—a delicious, hardy, and productive variety, but of comparative moderate size, \$2.

For the second best, with same requirements, to Luther Tucker, for Royal Scarlet, a large and beautiful as well as delicious variety, and but little inferior to the above, \$1.

The committee beg leave to remark, that it will be seen by the report of entries given above, that the much lauded Aberdeen Beehive strawberry was exhibited by two gentlemen, one of whom exhibited plants laden with fruit growing in pots, and one fruit from plants of open culture, and as far as they are able to judge by comparison with other varieties, they are disposed to think that it will be found to prove a hardy prolific, when grown with a fertilizer and rich variety, but not by any means superior, if equal in these particulars, to many favorite and well known old varieties. They also beg leave to add, that several varieties of Burr's New Seedlings were exhibited by two gentlemen, all of which have proved to be hardy and thrifty growers, and the New Pine, a prolific, large-sized, and delicious, as well as beautiful variety, and also one well suited for marketable purposes, as it is of firm flesh, keeps well, and bears transportation remarkably well.—**HERMAN WENDELL, Chairman.**

FLORAL DESIGNS.—GREENHOUSE PLANTS, &c.—The committee reports that there was exhibited by Joel Rathbone, of Kenwood, two beautiful round vase bouquets—not in competition—arranged with good taste, and composed of fuchsias, eupatoreums, gloxinias, pelargoniums, and other choice flowers.

By Dr. Herman Wendell, one large round bouquet for centre table vase, arranged with good taste, and composed of choice roses, pinks, pansies, spireas, &c., &c., to which the committee awarded the premium of \$2; one large flat bouquet for mantle vase, tastefully arranged, and composed of about the same varieties of flowers; a basket bouquet with handle, exquisitely arranged, composed of choice rose buds, pansies, forget-me-nots, &c. &c., to which the committee awarded the premium of \$2.

By James Wilson, of Albany, a very beautiful and well arranged large flat bouquet, for mantle vase, composed of choice and rare roses and buds, pelargoniums, fuchsias, spireas, &c., &c., to which the committee have awarded the premium of \$2; a large round bouquet for mantle vase, composed of about the same varieties of flowers; a round hand bouquet composed of rare and beautiful flowers, as hoyas, pelargoniums, &c., and arranged with exquisite taste, to which the committee have awarded the premium of \$1. A flat hand bouquet, arranged with equal good taste, the premium of \$1.

By L. Menand, a very beautiful round hand bouquet, composed of rare flowers, arranged with skill and taste, and several varieties of plants growing in pots, all in beautiful bloom and fine order, evincing Mon's well known skill—and for which the committee awarded the premium for the best six plants of different varieties in pots, \$2.

Flowers, &c., in variety were also contributed by S. E. Warren, J. M.

Lovett, E. P. Prentice, W. Brinckle, Mrs. Brinkerhoff, Mrs. J. Cary, Mrs. S. Cary, Mrs. Shire, Mrs. G. Wait, and Mrs. B. Wait.—S. E. WARREN, *Chairman*.

FLOWERS.—The President, Mr. Rathbone, Dr. H. Wendell, and Messrs. Wilson, were the principal exhibitors, and these gentlemen contributed a great variety of roses and other flowers. Flowers were also sent by W. Buswell, J. S. Gould, E. P. Prentice, W. H. DeWitt, E. C. McIntosh, &c. We have not space for the whole report and give the list of premiums.

PREMIUMS.

The committee have awarded the premiums as follows :—

ROSES.—For the best exhibition, to James Wilson, \$3.

For the best twelve varieties, viz, Princess Lambelle, Beauty Etheriel, Violatum, Madam Audot, Kean, Lady Stuart, Bourbon Moss, D'Agesson, Schon Brun, Blanche Superb, London Pride, and Violatum, to James Wilson, \$2.

For the best six varieties, viz, Persian Yellow, Lanzezeur, Leda, George IV., Tricolor D'Orleans, and Princess Clementine, to James Wilson, \$1.

PÆONIES.—For the best exhibition, to James Wilson, \$2.

For the best six varieties, viz, Whitejii, Humii, Reevesii, Pottsi, Albicans, and Fragrans, to James Wilson, \$1.

PANSIES.—For the best ten varieties, to Dr. H. Wendell, \$2.

For the best six varieties, to Dr. H. Wendell, \$1.

PINKS.—For the best three varieties, to James Wilson, \$1.

For the best display of annual and perennial flowers, to Joel Rathbone, \$2.—J. M. LOVETT, *Chairman*.

VEGETABLES.—The show was remarkable for the excellence of the specimens, which were so good the judges found it somewhat difficult to discriminate which was the best in some cases.

Dr. Wendell sent Victory of Bath cucumbers, Rhubarb, Hoo-Sung, a newly imported Chinese vegetable, and some fine specimens of large Early Asiatic cauliflowers, the seed of which was forwarded to Dr. Wendell from the London Horticultural Society. It was sown 15th of March, and the plants set out in May. We believe this to be a very fine variety, and will be quite an addition to our stock of early vegetables.

The report is as follows :—

The premiums awarded were as follows :—

BEETS.—To E. P. Prentice, \$1.

BROCCOLI.—To E. P. Prentice, \$2.

CABBAGE.—To E. P. Prentice, \$1.

CAULIFLOWERS.—To V. P. Douw, (under glass,) \$2.

To E. P. Prentice, (open ground,) \$1.

CELERY.—F. Keisel, \$1.

CUCUMBERS.—J. L. Rathbone, \$2.

LETTUCE.—Peter Chapman, \$1.

PEAS, (Landreths.)—V. P. Douw, \$1.

POTATOES.—B. Warren, Troy, \$1.

RHUBARB.—P. Chapman, \$1.

Also, the following discretionary premiums :—

PARSLEY.—F. Keisel, \$2.

KOHL RABI.—J. S. Gould, \$1.

ROMAN EMPEROR CUCUMBERS.—V. P. Douw, \$1.

To Dr. Herman Wendell, for his display of new and foreign vegetables, \$2.—R. F. JOHNSTONE, *Chairman*.

ART. V. *Massachusetts Horticultural Society.*

Saturday, June 2d, 1849.—An adjourned meeting of the Society was held to-day,—the President in the chair.

The committee to fill the vacancy in the Fruit Committee reported that they had made choice of S. Downer, Jr.

A communication was received from M. Vattermare in relation to an exchange of horticultural works of the various horticultural societies of France, and accompanied with several French publications. The thanks of the Society were voted to M. Vattermare, and his letter referred to a committee.

Messrs. Owen and Copeland were appointed a committee to fulfil the request of the librarian of Harvard College.

A committee of five was appointed as delegates to the North American Pomological Convention, at Syracuse, viz :—C. M. Hovey, Jos. Lovett, B. V. French, A. D. Williams, E. Wight.

W. R. Austin was elected Treasurer of the Society.

Adjourned one week to June 9th.

Exhibited.—FLOWERS : From the President of the Society, ranunculuses and anemonies in variety, and several sorts of herbaceous plants. From M. P. Wilder, six rhododendrons in pots, roses, &c., and the following tree pæonies :—*Rosea superba* (superb), *Le Soliel* (fine), *Imperatrice Josephine*, &c. From J. Breck & Co., herbaceous plants and tulips in great variety. From J. A. Kenrick, *Magnolia Soulangiana*, azaleas, &c., and a fine branch of *Wistaria Consequana* in full bloom. From W. Kenrick, *Wistaria Consequana*, striped horsechestnut, &c. From A. Aspinwall, roses in variety.

From Hovey & Co., splendid tulips, ranunculuses, and anemonies; among the tulips in the PRIZE stand were the following :—*Aglais*, *Rose blanca*, *Ambassador d'Holland*, *Polyphemus*, *Lewald*, *Lord Hill*, *Madame Vestris*, *Optimus*, *Camuse de Craix*, *Gloria Mundi*, *Trafalgar*, &c. From Messrs. Winship, azaleas, and a variety of hardy shrubs and plants. From P. Barnes, roses and cut flowers in variety. From J. G. Swan, Medford, a collection of indigenous plants. Cut flowers, &c., from J. Hovey, A. Bowditch, and others.

PREMIUMS AND GRATUITIES AWARDED.

TULIPS.—For the best thirty distinct varieties, to Hovey & Co., \$8.

For the second best, to J. Breck & Co., \$6.

For the third best, to A. Bowditch, \$3.

PANSIES.—For the best twelve varieties, to J. Breck & Co., \$4.

GRATUITIES.—To M. P. Wilder, for rhododendrons, \$2.

To Hovey & Co., for fine ranunculuses and anemones, \$2.

To A. Bowditch, for cut flowers, \$1 50.

To A. Bowditch, for hand bouquet, \$1.

To Miss Russell, for basket of flowers, \$1.

To Messrs. Winship, for mantel bouquets, \$1.

FRUITS: From J. F. Allen, figs; nectarines—Hunt's Early Tawney; grapes—Chasselas Bar Sur Aube, Black Hamburg, Zinfandel, White Frontignan, Grizzly Frontignan, Red Chasselas, Deccan's Superb, Gross Noir of Lorraine, Verdelho. From T. Needham, grapes—Black Hamburg, White Frontignan, Chasselas Musque.

From D. T. Curtis, pears—Easter Beurré, two specimens, of perfect texture, and fine flavor, saved from the dozen exhibited by him March 24th. The specimens since then have been wrapped in fine soft tissue paper, and placed in a wooden box, excluding the air, with very dry buckwheat chaff, then placing in a cool cellar. The experiments made by Mr. Curtis in regard to ripening and keeping this variety of pear are well worthy the attention of fruit growers.

VEGETABLES: From F. A. Davis, asparagus. From T. Needham, Young's Champion, and Manchester Prize cucumbers. From S. Walker, water cress.

June 9th.—An adjourned meeting of the Society was held to-day,—the President in the chair.

W. R. Richardson, and F. A. Davis, Boston, and F. W. Lincoln, Canton, were elected members.

Adjourned one week to June 16th.

Exhibited.—**FLOWERS:** From the President of the Society, ranunculuses, anemones, double and single hawthorns, and other flowers. From A. Aspinwall, Noisette, Hybrid perpetual, and other roses. From J. Breck & Co., tree pæonies in quantity, and other flowers. From T. Needham, pelargoniums, roses, *Clématis Sieboldii*, &c. From J. A. Kenrick, *Wistaria Consequana*, and other flowers. From M. P. Wilder, tree pæonies, among which we noticed *Le Soliel*, *Grand Duc de Bade*, *Ottónis*, *Heidi*, *Rosea superba*, &c., all fine; also roses in variety.

From Hovey & Co., several new lilacs, viz:—*Saugeana*, *grandiflora*, *Charles X.*, *Vatellina*, &c.; rhododendrons, twenty var. azaleas, hawthorns, and other flowers. From Messrs. Winship, hawthorns, azaleas, &c. Roses and cut flowers of various kinds from J. Dunklee, W. Kenrick, P. Barnes, L. Davenport, J. Nugent, J. Hovey, and others.

PREMIUMS AND GRATUITIES AWARDED.

HAWTHORNS.—For the best display, to Messrs. Winship, \$3.

For the second best, to J. A. Kenrick, \$2.

HARDY AZALEAS.—For the best display, to J. A. Kenrick, \$5.

For the second best, to Messrs. Winship, \$3.

SIXTEEN PANSIES.—For the best six varieties, to M. P. Wilder, \$5.

For the best display of flowers, to J. Breck & Co., \$3.

GRATUITIES.—To Messrs. Winship, for a display of spiræas for three or four weeks, \$5.

To Messrs. Winship, for two flat bouquets, \$1.

To J. A. Kenrick, for *Wistaria Consequana*, \$1.

To W. Kenrick, for bouquet, \$1.

FRUITS: From J. F. Allen, Black Brunswick, Brown and White figs; grapes—Wilmot's Black Hamburg, Garden Tokay, Red Chasselas, Grizzly Frontignan, Black Prolific (large bunches), Zinfindal, Chasselas Bar Sur Aube, Black Hamburg, Deccan's Superb, Purple Muscat of Alexandria (!), Black Frontignan; peaches—Grosse Mignonne, and George IVth; nectarines—Hunt's Early Tawney. From A. Bowditch, grapes—Black Hamburg; peaches—Coolidge's Favorite. From T. Needham, grapes—Chasselas Musque, White Frontignan, Black Hamburg, Red Chasselas, Chasselas Fontainebleau.

VEGETABLES: From W. C. Strong, brace cucumbers. From J. A. Kenrick, Myatt's Victoria rhubarb, twelve stalks, nineteen pounds.

June 16th.—An adjourned meeting of the Society was held to-day,—B. V. French, Esq., Vice President, in the chair.

M. P. Wilder, from the Committee on Finance, reported that stocks had been sold to the amount of \$3,571 75, and that that amount had been paid over to the treasurer as part of the fund to pay off mortgage.

Adjourned one week to June 23d.

Exhibited.—FLOWERS: From J. S. Cabot, a large collection of fifty-six varieties of irises, some of them exceedingly splendid. From M. P. Wilder, a fine flower of a new tree pæony called the Triomphe de Vandermalen, an exceedingly large, showy and superb variety; also a variety of other pæonies. From Hovey & Co., twelve varieties of hardy rhododendrons, very splendid; also seedling antirrhinums and pansies, and twelve kinds of ranunculuses, hardy azaleas, &c. Cut flowers in variety from the President of the Society, Breck & Co., Messrs. Winship, P. Barnes, A. Aspinwall, W. Kenrick, J. Nugent, A. Bowditch, and others.

GRATUITIES AWARDED.

To W. Kenrick, for fine specimen of laburnum, \$1.

To J. Nugent, for round bouquets, \$1.

To A. Bowditch, for six hand bouquets, \$1.

To Messrs. Winship, for mantel bouquets, \$1.

To P. Barnes, for cut flowers, \$1.

To J. Quant, for *Veronica Lindleyana*, \$1.

FRUITS: From Messrs. Hovey & Co., Wilmot's Black Hamburg No. 16, Black Hamburg, and Red Chasselas grapes. From O. Johnson, beautiful specimens of Coolidge's Favorite peaches. From J. F. Allen, grapes—Wilmot's Black Hamburg, very fine, Black Hamburg, Zinfindal, White Frontignan, and other sorts; peaches in variety; nectarines—Hunt's Early Tawney, fine. From A. Bowditch, strawberries—Early Virginia. From T. Needham, grapes—Black Hamburg, fine, White Frontignan, Wilmot's Black Hamburg, extra large, very fine, and other sorts. From J. Richardson, strawberries—Richardson's Early, Early Virginia, and Boston Pine.

VEGETABLES: From J. Lovett, Victoria Giant rhubarb, forty-one inches long;—twelve stocks weighing $21\frac{1}{2}$ pounds: also four new seedlings;—all look well. From O. N. Towne, cauliflowers. From G. C. Crowninshield, by J. Quant, Prince Albert peas.

June 23d.—An adjourned meeting of the Society was held to day,—the President in the chair.

A letter was read from S. Moulson, of Rochester, N. Y., accompanied with Northern Spy apples.

Adjourned one week to June 30th.

Exhibited.—**FLOWERS:** From the President of the Society, moss and other roses, and cut flowers in variety. From J. P. Cushing, Esq., a fine display of double German stocks. From J. S. Cabot, twelve fine varieties of pæonies, including sulphurea, Buyckii, &c. From Hovey & Co., twelve varieties of pæonies, among which were festiva, striata anemoneflora, Hericartiana, &c.; also ten kinds of moss roses, including fine specimens of Princess Adelaide, prairie rose Mrs. Hovey, and others; hardy roses in variety, and a cut flower of the new and superb Cereus crenatus. From M. P. Wilder, twenty-two varieties of pæonies, among which were sulphurea, Buyckii, festiva, &c.; also moss and other roses. Roses and cut flowers from Breck & Co., P. Barnes, W. E. Carter, Messrs. Winship, A. Bowditch, and others.

AWARD OF PREMIUMS.

PÆONIES.—For the best twelve flowers, to M. P. Wilder, \$5.

For the second best, to J. S. Cabot, \$4.

For the best display, to Breck & Co., \$3.

FRUITS: From J. P. Cushing, Esq., by G. Evers, grapes—Black Ham-
burgh, Syrian, Grizzly Frontignan, White Frontignan. From J. W. Fos-
ter, strawberries—Virginia, and Willey Seedling. From J. Richardson,
strawberries—Richardson's Early, Boston Pine, Cambridge. From A.
Bowditch, strawberries—Hovey's Seedling. From T. Needham, grapes—
Chasselas Musque, Red Chasselas, fine, White Frontignan, Black Ham-
burgh, very fine, Chasselas Fontainebleau, Wilmot's Black Ham-
burgh, extra fine, very large. From Hovey & Co., strawberries—Aberdeen Bee-
hive, and Boston Pine; grapes—Black Ham-
burgh, Wilmot's Ham-
burgh, No. 16, Red Chasselas, and Golden Chasselas. From Samuel Moulson,
Rochester, N. Y., apple, Northern Spy, in good state of preservation, fine
specimens.

Fruits tested.—Richardson's Early strawberry sustains the reputation it
has heretofore borne. Seedling strawberry, from the President of the Soci-
ety, bears a resemblance to Richardson's Early, somewhat less acid, regular
in form.

Semi-annual Exhibition of the Society, June 25th, 26th, and 27th.—The
first semi-annual exhibition of the Society took place on Monday, Tues-
day, and Wednesday, the 25th, 26th, and 27th, having been postponed
from the 20th, on account of the lateness of the season. The show was
much better than was anticipated; the weather had been exceedingly hot
and dry the week previous, and many plants had begun to feel the effects

of the drought; but, notwithstanding this, the display was remarkably fine. The roses were of course the main feature of the exhibition, and they were surpassingly fine as well as liberally supplied. Some of the sorts surpassed any ever before exhibited. The display of pot plants was limited, but the specimens were remarkably well grown. Of fruits, there was a superb display of grapes. The strawberries were not so fine as we anticipated; but this must be attributed to the lateness of the season, as the Hovey's Seedlings were scarcely ripe. In the variety of flowers, &c., contributed, we can only enumerate a few of the most important kinds. The Epiphytes, of Mr. Lowell, were highly beautiful, particularly a specimen of *Cattleya* sp. nova: they were also exceedingly well grown by his gardener, Mr. Owens. *Stephanotus floribundus*, and *Ixora coccinea*, from Messrs. Hovey & Co., were the most admired objects in the room: finer grown plants have rarely been seen. The pelargoniums, from the same gentlemen, were very large and in fine flower for so late a period of the year. The roses of Messrs. Hovey & Co. were truly magnificent, embracing such as Walter Scott, Cynthe, Neron, Louise Leker, Gil Blas, Boula de Nantiel, &c. Messrs. Breck & Co. made a fine display of herbaceous plants, particularly of delphiniums. Our report is as follows:—

From the President of the Society, prairie and other roses, phloxes, &c. From A. Aspinwall, a fine collection of roses. From Jos. Breck & Co., a large collection of campanulas, phloxes, spiræas, double stocks, &c., and fine roses. From J. A. Kenrick, fine blooms of *Magnolia macrophylla*, and *longifolia*, *Kalmia latifolia*, &c. From M. P. Wilder, a fine collection of roses, peonies, and other flowers. From John A. Lowell, fine plants of *Cattleya nova* sp., *C. crassifolia*, *Oncidium flexuosum*, *Burlingtonia rigida*, *Brassia verrucosa*, *Plumiera rubra*, *Tecoma jasminoides*, &c. From Hovey & Co., *Stephanotus floribundus*, *Ixora coccinea*, *Hydrangea japonica*, *Veronica Lindleyana*, *Whitfieldia lateritia*, *Gesnera tubiflora*, six kinds of fine gloxinias, and pelargoniums, viz:—Beck's Cassandra, Aurora, Isabella, Rosy Circle, Drury's Pearl, and Forget me not; ten var. of prairie roses, including Mrs. Hovey, one of the most superb of all the prairies; sixteen varieties of moss roses, and three hundred varieties of hardy roses; *Kalmia latifolia*, thirty var. verbenas, *Abutilon Bedfordianum* and venosum, and numerous other flowers.

Cut flowers, roses, bouquets, &c., were exhibited from A. Bowditch, B. V. French, W. Kenrick, O. N. Towne, J. Quant, E. Wight, A. D. Weld, P. Barnes, Messrs. Winship, Louis Davenport, W. W. Merrill, Mrs. Spaulding, Miss Dyer, of Lynn, and others.

AWARD OF PREMIUMS AND GRATUITIES.

Roses.—For the largest and best collection of roses, and best kept during the exhibition, to A. Aspinwall, \$12.

For the second best, to Joseph Breck & Co., \$10.

For the third best, to Hovey & Co., \$5.

Class I. For the best thirty distinct varieties, to A. Aspinwall, \$8.

For the second best, to Hovey & Co., \$6.

Class II. For the best twelve distinct varieties, to J. Breck & Co., \$5.

Class III. For the best ten varieties of hardy perpetual roses, to A. Aspinwall, \$5.

For the second best, to Breck & Co., \$4.

For the third best, to Hovey & Co., \$3.

For the best collection of China roses, to A. Bowditch, \$6.

Class IV. For the best display of prairie roses, to Hovey & Co., \$4.

For the second best, to Messrs. Winship, \$3.

PLANTS IN POTS.—For the best display, to Hovey & Co., \$8.

PINKS.—For the best pinks, to John Quant, \$4.

HERBACEOUS PLANTS.—For the best display, to J. Breck & Co., \$8.

For the second best, to Parker Barnes, \$5.

MAGNOLIAS.—For the best display during the season, to J. Kenrick, \$3.

GRATUITIES.—To J. A. Lowell, for display of parasitical plants, \$5.

To Hovey & Co., fine display of pelargoniums, \$6.

To Hovey & Co., for plant of *Stephanotus floribundus*, \$5.

To Hovey & Co., for display of Sweet Williams and verbenas, \$3.

To O. N. Towne, for hand bouquets, \$2.

To A. Bowditch, for fine display of herbaceous and other flowers, \$5.

To A. Bowditch, for hand bouquets, \$2.

To Miss Russell, for display of flowers, and flower baskets, \$3.

To Mrs. Spaulding, for plants and bouquet, \$3.

To B. V. French, for large and well kept display of roses and herbaceous plants, \$5.

A. Bowditch, Parker Barnes, David Haggerston, Judges.

FRUITS: The principal fruit exhibited was grapes, and the specimens were all good, and some of them superior to any ever before shown at the room, particularly at so early a period. Mr. J. F. Allen sent a profusion of kinds, numbering upwards of thirty. The most splendid specimens were from Messrs. Hovey & Co. and T. Needham, and we hardly knew which to admire most, the Victoria from the former, or the Cannon Hall from the latter; the clusters weighed about *two and a half pounds each*, the berries very large, and the Victoria fully colored; Mr. Needham also sent some fine berries of Wilmot's Black Hamburg, but the clusters were small. Mr. Allen had a bunch of the Chasselas Musqué, which was finely grown. Mr. O. Johnson sent a dish of beautifully colored and good sized Coolidge's Favorite peaches. Of strawberries, as we have before remarked, the show was not large; the kinds were principally Hovey's Seedling and Boston Pine, of which Mr. Richardson sent some fine specimens, particularly of the latter. Messrs. Johnson and Aspinwall also sent fine Hovey's Seedlings.

From O. Johnson, Coolidge's Favorite peaches, and Hovey's Seedling and Prolific Hawthorn strawberries. From A. Aspinwall, Hovey's Seedling strawberries. From W. C. Strong, four varieties of grapes. From J. F. Allen, thirty-two sorts of grapes, among which were Black Hamburg, Wilmot's Black Hamburg, Chasselas Musque, Chasselas Rose, Chasselas Red, (!) Muscat of Lunel, Muscat of Alexandria, Tottenham Park Muscat, Violet Muscat, (!) Austrian Muscat, St. Peters of Aliers,

not true probably, White Rissling, Ferral, Cannon Hall Muscat, Red Traminer, Black Prolific, Black Tripoli, Deccan's Superb, Scharges Henling, and a seedling; figs, three varieties, from the Azores; lemons, Bergamot, Lime; peaches, Hoffman's Early, George IV., and Grosse Mignonne; nectarines, Hunt's Early Tawney, and Temple. From E. Burns, handsome Black Hamburg grapes and tomatoes.

From Messrs. Hovey & Co., five varieties grapes, viz: Victoria, Muscat of Alexandria, Wilmot's New Hamburg No. 16, Red Chasselas, and Black Hamburg; lemons of large size, Aberdeen Beehive strawberries, and May Bigarreau cherries. From T. Needham, grapes—Wilmot's Black Hamburg, White Frontignan, Black Hamburg, Red Chasselas, Muscat of Alexandria, Cannon Hall Muscat, Black Frankindale in a pot, eight bunches on the vine; oranges, one dish. From J. Richardson, Hovey's Seedling, Boston Pine, (Hovey's,) Cambridge, Alice Maude, and Aberdeen Beehive strawberries. From Mrs. S. Spaulding, fine lemons. From O. N. Towne, grapes—Black Hamburg, Royal Muscadine. From S. W. Cole, apples—Sutton Beauty, very handsome, Red Russet, Ladies' Sweeting, Roxbury Russet, Shawmut, Philadelphia Pippin, Tewksbury Winter Blush, in good state of preservation. Jenny's Seedling strawberries from A. Bowditch, and W. P. James.

HORTICULTURAL MEMORANDA

FOR JULY.

FRUIT DEPARTMENT.

Grape vines, in the greenhouse or grapery, will now begin to color their fruit. Continue to go over the vines once a fortnight, and stop all laterals. Keep the house well damped, as now is the time to give the berries a good swell. Air early in good weather, and close the house in good season. Towards the last of the month, as the berries get well colored, the house will require to be kept rather drier. Vines in cold houses will require just the same management we directed for the greenhouse in our memoranda for June. Keep the laterals stopped, and guard carefully against mildew, the only thing to be feared in such houses. If the border is dry, it should be liberally watered, and mulched with old hay or coarse manure. Vines in the open air should be kept clear of wood, by cutting away all the new growth not wanted for next year.

Strawberry beds will require to be looked after as soon as the fruit is gathered: lay in the runners, if they are wanted; if not, dig them up or cut them off.

Fruit trees should now be summer pruned, as we have advised in a previous page. If our directions are carefully followed, a plentiful supply of flower buds will be the result. Young grafted trees should be looked after, the ties loosened, and the young branches staked, as one high wind might destroy the labor of a season. Plum and cherry trees may be budded the last of this month.

Peach trees in pots should now be liberally moistened as the fruit is swelling off.

Figs in pots will now be showing their second crop, and should be liberally watered occasionally with liquid manure.

FLOWER DEPARTMENT.

Dahlias should now receive attention. Keep them well syringed, and, if in a dry situation, a good mulching at the root will bring them on in fine condition. See that they are properly staked and pruned.

Pelargoniums should now be headed in, and the cuttings put in for young plants, if a stock is wanted. A frame or hand glass under a north fence, or where they will be shaded in the heat of the day, is the best place. If only a few are wanted, they may be put into pots.

Camellias should now be potted; after this is done, they should be placed in a sheltered, shady situation till September. Inarching may be commenced again the last of the month.

Carnations and *Picotees* will now be in full flower, and, if wanted for exhibition, will require some attention,—such as tying up the flower buds, shading, &c. Layering should also be commenced the last of the month.

Azaleas may be shifted now, if not done before. Now is a good time to graft the variegata, and other slender-growing sorts, on to the old *phœnicea*.

Tulips, *Hyacinths*, *Ranunculuses*, and other spring flowering bulbs, should now be taken up and laid away till October.

Achimenes, of sorts, should now have a shift into larger pots.

Sweet William, *Blue Bells*, and other biennial and perennial flower seeds, may now be planted.

Mignonette and *Sweet Alysium* should be sown this month for winter blooming.

Pansies should be propagated this month by cuttings. Seeds may also be sown now for blooming in spring.

Roses, after they have done blooming, may be layered, if young plants are wanted of any particular kinds. *Prairie roses* may have the old branches cut out, if crowded, so as to make room for the new shoots.

Chrysanthemums, in the open ground, may have the tops of the strong shoots layered off into pots, and they will be fine dwarf flowering plants in November.

Oxalis Bowiei and *hirta* should be potted the last of the month, as they begin to bloom in August.

Heliotropes, *Scarlet Geraniums*, and other showy plants suitable for bedding out, should now be propagated for next spring's stock.

Neapolitan violets should be kept well watered if the weather proves dry.

Hardy shrubs, of many kinds, may now be layered.

Gladioluses should be carefully staked up, or the first wind will be likely to injure them.

Greenhouse plants, of all kinds, should now be pruned so as to make good shaped plants before autumn. Cuttings, of many kinds, may also now be put in, if a young stock is wanted.

THE MAGAZINE OF HORTICULTURE.

AUGUST, 1849.

ORIGINAL COMMUNICATIONS.

ART. I. *Some Remarks on the more general Cultivation of Indigenous Trees, Shrubs, and Herbaceous Plants: with a Notice of the Vaccinium Vitis-Idæa, growing in Roxbury.*
By GEN. H. A. S. DEARBORN.

DEAR SIR,—In the last number of your magazine is an interesting account of a botanical exploration in the County of Essex, by John Lewis Russell, Esq., one of the most eminent and meritorious botanists of New England, which I have read with great pleasure, and ardently hope that more attention will be soon given, by our proprietors of nurseries, to the culture of indigenous trees, shrubs, and herbaceous flowering plants, for there are many which, while they are highly appreciated in Europe, cannot be found in the nurseries, or the ornamental grounds of gentlemen residing in the country, on this continent. The *Vaccinium Vitis-Idæa*, (mountain cranberry,) which has been found in Danvers, and, hitherto, in no other part of this State, as alleged by Mr. Emerson, in his invaluable "*Report on the Woody Plants of Massachusetts*," has been discovered in this town. Last summer, while laying out the avenues and paths in Forest Hills Cemetery, a space of ground about thirty feet long and twenty wide,* on the summit of a hill, was found to be covered with that beautiful plant; and this spring, the whole area was whitened by the delicate blossoms. I had never seen the plant before, although I have travelled over a large portion of the New England states.

* It is on the eastern side of Mulberry Avenue, near its junction with Beech and Mount Warren Avenues.

There is a plant now in bloom on the hill-sides at Forest Hills, which merits cultivation from its beautiful spikes of trumpet-shaped yellow flowers,—the *Gerardia flava*. There is another variety of the same genus,—*Gerardia pedicularia*,—which has numerous branches, equally elegant. As they are perennial, they are appropriate for the borders of garden avenues.

As an ornamental shrub, or small tree, the June berry,—*Pyrus botrydium*, of Willd., and *Amelanchier canadensis*, of Torrey and Gray,—is among the earliest and most beautiful of our forests, and should be civilized by cultivation.

The *Lilium canadensis*, or yellow lily, which is to be found in wet meadow land all over New England, is one of the most superb of that family of plants, and is much improved by cultivation. I have cultivated them for several years. Instead of one or two flowers, they have ten or a dozen, and have attained the height of five feet and a half.

The native rhododendrons and *Kalmia latifolia*, I was glad to find in your nursery last spring, and to learn that you had numerous seedling plants, for they are our most magnificent flowering shrubs, and I know not their superiors among all the exotic shrubs which are most celebrated, for they are unsurpassed in beauty when in bloom, and being so hardy as to endure the most rigorous winters, as far north as Maine, they can be introduced into every garden, and will be deemed the most precious acquisitions which have been made from the domain of the American Flora.

To these shrubs may be added the azalea, the rhodora, and the fine species of the cornus, which ascend to small trees, and are all elegant. Allow me to recommend the appropriation of a portion of your extensive and valuable nursery to the culture of NATIVE trees, shrubs, and herbaceous flowering plants, which can be cultivated in this State, and thus enable your fellow citizens to obtain specimens of American trees and plants without sending to England, Scotland, France, or Holland for them.

With assurances of gratitude for the eminent services you have rendered your country, by the publication of the MAGAZINE OF HORTICULTURE, the splendid work on FRUITS, and the

establishment of a large NURSERY, I have the pleasure of being your sincere friend, and most obedient servant,

H. A. S. DEARBORN.

Hawthorn Cottage, Roxbury, July, 1849.

Our thanks are due to Gen. Dearborn for his valuable suggestions, and more particularly for calling the attention of our botanical friends to the fact of the *Vaccinium Vitis-Idæa* growing so near our city, and yet so long escape the attention of botanists.

It is certainly somewhat surprising, that our native shrubs and plants are not better known, and more extensively introduced to our gardens. Mr. McIntosh, of Dalkeith, the editor of a Scottish journal of horticulture, in the latest number (dated July 4,) received by the last mail, in noticing the April number of our magazine, and our article on a selection of shrubs for gardens, justly remarks, "that it will be perused by the English reader with some surprise. We, in Britain, look upon the hardy deciduous and evergreen shrubs of America as forming one of the grandest features in our gardens, and are apt to picture to ourselves how magnificent must be the dressed grounds of an American country gentleman, supposing them to be planted with the numerous splendid trees and shrubs with which that country so much abounds." We only hope, for the credit of the taste of our countrymen, that such a neglect of the growth of our own trees and shrubs will not long exist. A few such papers as those of Mr. Russell's and Gen. Dearborn's, cannot fail to awaken our amateurs and nurserymen to the importance of a more extended cultivation of our indigenous trees, shrubs, and plants.—*Ed.*

ART. II. *Descriptions and Engravings of Select Varieties of Pears.* By the EDITOR.

THE severity of the past winter, in the vicinity of Boston, was particularly injurious to pears: and they seem to have suffered fully as much in their blossoms as the peach trees; for, in many localities, there is an abundant crop of peaches

the present season, while there is scarcely a place within a large area near the sea board which can boast of an exemption from the general destruction of the crop. This, to us, and we think we may say to our pomological friends, will be a serious loss, in some respects; for we shall not have the opportunity, for at least a year, of testing the qualities of several new and reputed *fine* pears, which, the present season, would probably have afforded us excellent specimens. Fortunately, we have a quantity of drawings on hand, which will enable us to give, from time to time, a continued account of many good things, until another year, when we may look forward for a bountiful crop which will amply repay our present loss. We now are enabled to present the descriptions and engravings of six American seedlings, some of which are of high merit.

109. MOYAMENSING. *Dictionary of Gardening*, Am. Ed.

Smith's Early Butter, of some.

The first account we have of this very fine pear, (*fig.* 29,) is a brief description of it, accompanied with an engraving, in the American edition of Johnson's *Dictionary of Gardening*, published in Philadelphia, and edited by Mr. D. Landreth. As no higher eulogium was passed upon it, than that it was a "desirable variety," we did not immediately add it to our collection; and it was not till last year, when several most beautiful specimens were sent to us by J. P. Cushing, Esq., from his fine collection, that we were aware of the superior qualities of the Moyamensing pear: Mr. Cushing does not keep a variety in his collection which does not rank among the very best, and that he highly appreciated this variety, we considered sufficient to establish its merits: but, upon tasting the specimens, we found them even better than his good opinion of its qualities had led us to expect. The following note accompanied the specimens sent to us:—

DEAR SIR,—I send you a few of the Moyamensing pears, produced from scions, received from Dr. Brincklé of Philadelphia, which he represents as a seedling produced in the garden of J. B. Smith, Esq., of that city. It does not ripen

here as in Philadelphia, which Dr. B. says is from the middle of July to the last of September. The first I observed in eating here was about a week since; if you have not had specimens *grown here*, those now sent will enable you to determine the quality. I think it less good than those grown in Philadelphia, which I thought, at the time they were sent me by Dr. B., were nearly equal in quality to a St. Michael, and consequently very desirable; probably our climate affects

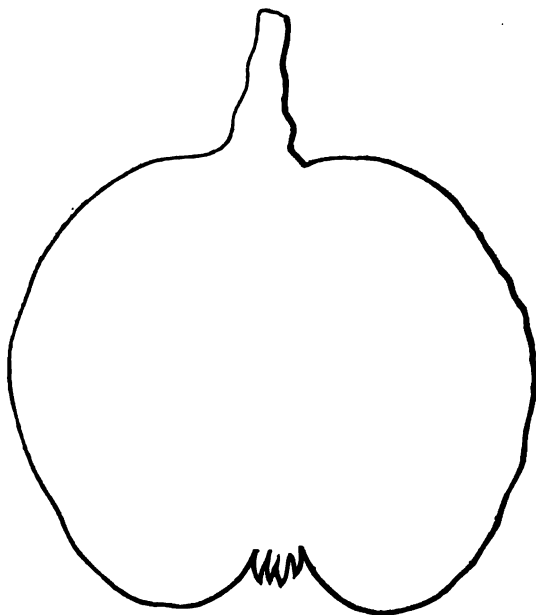


Fig. 29. Moyamensing Pear.

them unfavorably, compared with the one in which they originated.—*Yours, very respectfully, J. P. Cushing, Watertown, Sept. 24, 1848.*

The original Moyamensing pear tree stands in the grounds of the late J. B. Smith, Esq., of Philadelphia, and, three or four years ago, it was thirty feet high. It was, we believe, introduced more particularly to the notice of cultivators by Dr. Brincklé of that city, who sent the scions to Mr. Cushing in the spring of 1846, from which several fruits were gathered last year. Dr. Brincklé also sent scions of it, the present sea-

son, to the Massachusetts Horticultural Society, and to ourselves; and, by the liberality of Mr. Cushing, we also received a few scions from his tree, all of which are now growing finely. Its productiveness, as well as early bearing, are qualities which render it very valuable.

The tree is a good grower, somewhat open in its habit, and it drops its leaves earlier than most other pears; the wood is stout, rather short-jointed, and of a light yellow, or reddish yellow, shade.

Size, medium, about two and a half inches long, and two and three quarters in diameter: *Form*, round, slightly depressed at each end, with an uneven surface, occasionally slightly furrowed from the stem to the crown: *Skin*, fair, smooth, pale lemon yellow when mature, nearly covered with large irregular patches of smooth russet, and sparsely dotted with small russet specks: *Stem*, short, about half an inch long, very stout, swollen, knobby, fleshy at the base, and inserted with scarcely any cavity: *Eye*, small, open, and deeply sunk in a rather large, open, and furrowed basin; segments of the calyx long, slender, projecting: *Flesh*, yellowish white, rather coarse, buttery, melting and juicy: *Flavor*, very sugary and luscious, with a rich spicy aroma: *Core*, medium size: *Seeds*, medium size, obovate. Ripe in September.

110. LOCKE. *Magazine of Horticulture*, Vol. III, 1837.

Locke's Beurré, of some.

A full account of this pear (*fig. 30*,) will be found in one of our earliest volumes, (III, p. 52,) a brief abstract of which we republish for the benefit of those who have not those volumes in hand. Twelve years have passed by since we first introduced it to notice, and, during that long period, from the number of new sorts which have attracted attention, the Locke, like many other native sorts, has been forgotten, and its place usurped by foreign varieties not possessing a tithe of its merits.

This pear was produced from seed by Mr. Isaac Locke, of West Cambridge, a very successful orchardist, and who, for many years, gathered a surprising large quantity of fruit from a moderate extent of ground. In the fall of 1827, Mr. Locke

planted a quantity of pear seeds upon an old asparagus bed ; a large number of them vegetated, and the trees grew vigorously, and soon attained a large size. During the severe winter of 1834 and '35, (similar to that of 1848 and '49,) every tree was destroyed except the one which produced this pear. The succeeding year, this tree flowered, and produced a few pears ; and, in 1836, it bore upwards of a peck of fruit.

We sent Mr. Manning some of the specimens of this pear, which we had from the original tree, and he liked it so well,

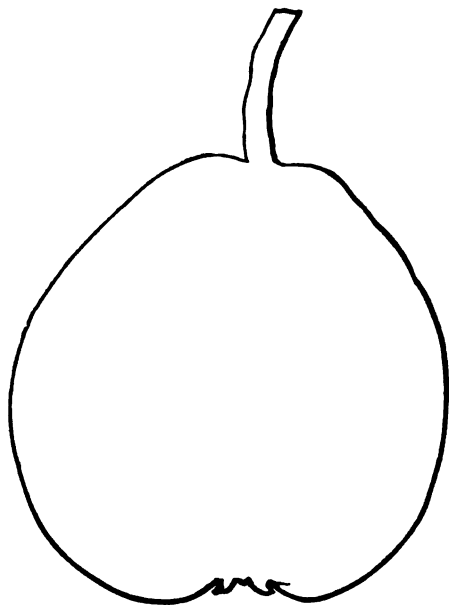


Fig. 30. *Locke Pear.*

he immediately procured scions ; subsequently we added it to our collection, and the trees will not probably bear till another year. But, since our first description of it, we have several times had specimens from Mr. Manning's trees, and our drawing and present description are made from fine fruits received in 1847 from his collection.

The Locke pear was raised from seeds of the St. Germain, or the Doyenné blanc, but from which Mr. Locke is not sure. The habit of growth, leaves, and general character of the

tree assimilate to the St. Germain, and we should think it a seedling from that old pear, probably impregnated with the Doyenné blanc. The wood is of a dull yellow color.

Size, medium, about two and three quarters inches long, and two and a half in diameter: *Form*, roundish obovate, full at the crown, ending obtusely at the stem: *Skin*, fair, slightly rough, yellowish green, becoming lemon yellow when mature, very broadly tinged with bright red on the sunny side, and covered with rather large, irregular shaped, pale russet specks: *Stem*, medium length, about one inch long, rather stout, pale brown, dotted with gray, slightly curved, and inserted with scarcely any cavity on the obtuse point: *Eye*, rather small, open, and slightly sunk in a very shallow basin; segments of the calyx broad, irregular, and partially recurved: *Flesh*, yellowish white, coarse, melting and juicy: *Flavor*, rich, sweet, perfumed, and excellent: *Core*, large: *Seeds*, medium size, very pale brown. Ripe in December.

111. BURLINGAME. *N. E. Farmer*, Vol. IX, p. 82.

The Burlingame pear (*fig. 31.*) is one of the pears early brought to notice by the Massachusetts Horticultural Society, through their honorary member, Dr. S. P. Hildreth, of Marietta, Ohio. In the fall of 1830, he sent a drawing and a description of this variety to the Society, and requested that, as it was a seedling, they should give it a name. In accordance with Mr. Hildreth's request, they called it the Burlingame, in honor of Mrs. Burlingame, of Marietta, a daughter of the late Rufus Putnam, who saved the seeds from pears eaten on the way from New Jersey to Ohio, as long ago as 1790. Owing to the tree having been planted in an unfavorable soil and situation, it did not bear till the fourteenth or eighteenth year; from that time, up to 1830, it continued to be a regular bearer, and free from the blight which affects the pear trees in the west.

Scions were sent to the Horticultural Society in the spring of 1831, and distributed among the members; but, from some cause, it does not seem to have become generally known, and even our pomological writers appear unacquainted with it. Kenrick mentions it in his last edition of the *American Or-*

chardist, (1842); but neither Mr. Manning or Mr. Downing give any account of it; and, among the multitude of varieties cultivated around Boston, the Burlingame is rarely seen.

Last autumn, Dr. Hildreth sent us some of the pears, accompanied with the following note:—

DEAR SIR,—I send you five Burlingame pears; four are hard yet, and one ripe, to give you the color of the fruit. They are below the average size. Some years ago, I sent a drawing and description of the fruit to General Dearborn, the

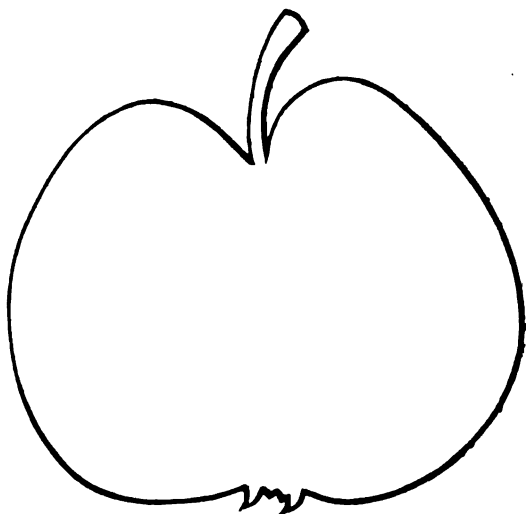


Fig. 31. Burlingame Pear.

first president of the Massachusetts Horticultural Society. When fully ripe, we think it a fine pear, both in appearance and taste. I have not seen the name amongst your fruit, although scions were sent to Messrs. Kenrick and Manning many years ago.—*Yours, &c., S. P. Hildreth, Marietta, Ohio, August 25th, 1848.*

The specimens, when they came to hand, were all fully ripe, though not so much so but that we could make a good drawing as well as judge of the quality of the pear, which was nearly first rate.

Dr. Hildreth describes the tree as growing pyramidal, and

broad at the base; wood strong, light brown, inclined to green, and speckled with fine light-colored dots; leaves large, oval, pointed, nearly flat, and serrated on the margin; petioles long. In Marietta, it ripens from the middle of July to the last of August,—best when ripening on the tree, but very good if gathered when hard and ripened in the house.

Size, medium, about two and a quarter inches long, and two and three quarters in diameter: *Form*, round, largest at the crown, and slightly depressed at each end: *Skin*, fair, smooth, pale yellow when mature, deeply shaded with light red in the sun, and thickly covered with small russet specks: *Stem*, medium length, about three quarters of an inch long, rather slender, curved, and deeply sunk in a rather large, open cavity: *Eye*, medium size, open, and very slightly depressed; segments of the calyx short, pointed: *Flesh*, white, slightly coarse, melting and juicy: *Flavor*, rich, sugary, and perfumed: *Core*, large, somewhat gritty: *Seeds*, large. Ripe in August and September.

112. STEVENS'S GENESSEE. *Am. Orchardist*, 4th Ed., 1842.

Guernsey, *Pom. Manual*, Vol. I, p. 145.

Genesee, Ken. *Am. Orchardist*, 1st Ed.

Stevens' Genesee, London Hort. Soc. *Cat.*, 3d Ed., 1842.

Stephens's Genesee, of some.

For the earliest account of this excellent American pear, (*fig. 32*.) we are indebted to Mr. W. R. Prince, of Flushing, L. I., who briefly described it in his *Pomological Manual*, published in 1831, under the name of the Guernsey pear, in honor of J. K. Guernsey, of Monroe County, N. Y., who sent him scions for propagation; subsequently, however, to the publication of that volume, and before the index was put to press, Mr. Prince inserted the name of Stevens's Genesee, with a note, that, "in future, that name would be adopted, Mr. Guernsey having informed him that it was raised from seed by Mr. Stevens, and that it ought to bear his name."

It is somewhat remarkable, that a pear possessing so many fine qualities should have been so briefly noticed by pomological writers. We could find no correct account of its origin in any of our treatises on fruits, and we are indebted to the *Transactions* of the New York State Agricultural Society for

1847, (p. 327,) for the following history, which had never before been published :—

“ In 1794, James W. Stevens, Esq. removed from Philadelphia to Batavia in this State; but previous to such removal, however, he procured pear seeds from fruit grown in the vicinity of Philadelphia, and took them with him to Batavia, where he planted them. Mr. Stevens succeeded in fruiting a large number of varieties, from which he selected this one for general dissemination, and distributed scions pretty exten-

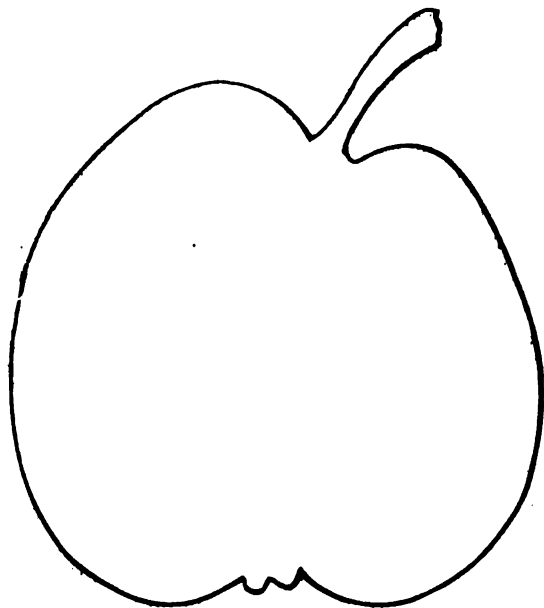


Fig. 32. Stevens's Genesee Pear.

sively among gentlemen in that region of our State, and, among others, he gave some to a Mr. Guernsey, of Pittsfield, Monroe County, who gave it the name of Stevens's Genesee, and first brought the fruit to the notice of pomologists in Rochester.”

This pear is but little known, except in Western New York; it is there extensively cultivated, and justly holds a high rank,—nearly equalling the well known Doyenné blanc, so generally disseminated under the name of VIRGALIEU in

that region. During our visit to Western New York last autumn, we saw some very beautiful specimens of the fruit at Rochester, and, through the kindness of our friends, brought home several, from one of which our drawing was made. Its only fault is that of occasionally rotting at the core: it should be gathered rather early, and ripened in the house.

The tree is moderately vigorous in its growth, of a rather diverging habit, with dark grayish wood. At Rochester, it often ripens the last of August, about the time of the Williams's Bon Chrétien, but in New England, its period of maturity is September.

Size, large, about two and three quarters inches broad, and two and three quarters in diameter: *Form*, roundish obovate, somewhat of the shape of the Doyenné blanc, but rounder, and fuller at the base, and broader at the crown: *Skin*, fair, smooth, of a pale yellow when mature, considerably covered with small russet specks: *Stem*, medium length, about one inch long, rather stout, thick at the base, and inserted in a rather shallow, one-sided cavity: *Eye*, medium size, open, and little sunk in a broad shallow basin; segments of the calyx short, stiff, projecting: *Flesh*, white, fine, melting and juicy: *Flavor*, rich, sugary, perfumed, and delicious: *Core*, medium size: *Seeds*, ?. Ripe in September.

113. GUSTINE'S SUMMER.

This new pear, (*fig. 33*.) of which we have already given a brief account, (p. 106,) was sent to us by J. M. Earle, Esq. of Worcester, president of the Worcester County Horticultural Society, and, so far as we could judge from a single specimen, it appears to be worthy of cultivation among our limited number of early pears. Not having fruited it ourselves, we requested Mr Earle, who has a fine collection of the best pears, to give us some account of its origin, and general qualities, and the following is his reply:—

FRIEND HOVEY,—Thy letter is at hand. I did not fruit Gustine's Summer pear till last year, and then had but eight or ten specimens. I do not recollect about the one sent thee, only that it was one of two or three of the last of them, and I thought it was hardly a fair specimen. I think they will

average larger than a good sized Madeleine. My trees came from John Wilcomb, of Flushing, who said they were "as good as Dearborn's Seedling, and twice as large." I put a good deal of confidence in his judgment. The tree appears to be very hardy, of a pretty strong and upright growth, giving off rather long spurs, nearly at right angles, and perhaps one fourth of them pointed or thorny. Probably as the tree grows older, it may lose this characteristic. I could send thee specimens of the leaves, but suppose thee hast it growing. I

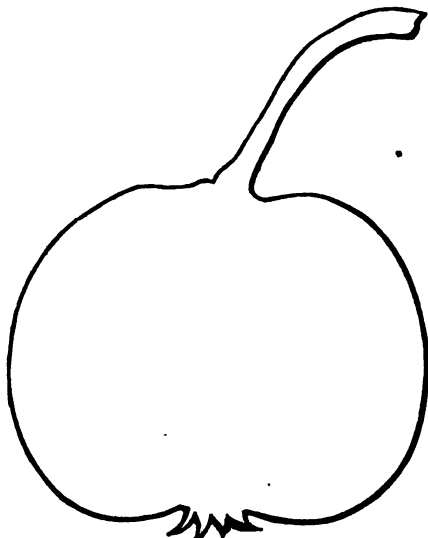


Fig. 33. Gustine's Summer Pear.

expected more fruit from the tree this year, but it perished in the general blight of fruit which we had, and I believe there are but two pears on the tree. I nearly forgot to say, that Gustine's Summer originated in New Jersey, as I understand, and was first disseminated by Mr. S. J. Gustine, nurseryman, at Morristown. I presume he would give thee any desirable information respecting it.—*Thy friend, J. M. Earle, July 21st, 1849.*

Size, medium, about two inches long, and two and a half in diameter: *Form*, roundish, flattened at the crown, and very obtuse at the stem: *Skin*, fair, smooth, clear lemon yel-

low when mature, and dotted with small russet specks: *Stem*, long, about one and a quarter inches, slender, curved, little fleshy at the base, and inserted without any cavity in the obtuse end: *Eye*, medium size, open, and slightly depressed in a broad, shallow basin; segments of the calyx pointed, diverging: *Flesh*, white, rather coarse, melting and juicy: *Flavor*, sugary, pleasantly perfumed, and good: *Core*, medium size: *Seeds*, small. Ripe in August.

114. OSWEGO BEURRÉ'. *Horticulturist*, Vol. I, p. 324.

Read's Seedling, of some.

We have already given some account of the origin of the Oswego Beurré, (*fig. 34*.) in an article in our volume for 1847, (XIII, p. 198,) in which we made some remarks relative to its name, believing its legitimate title to be Read's Seedling. From the facts which were first published with the description of it in the *Horticulturist*, it appeared that a new name was given to it by Mr. Allen, who introduced it to notice. But since that time, having conversed with him in regard to this subject, we see no impropriety in its being called the Oswego Beurré,—though we think it would have been better to have left the Beurré off, and called it the Oswego pear. We had learned from the *Genesee Farmer* that it was well known by Mr. Read's neighbors as Read's Seedling; but Mr. Allen states that he gave it that name himself, when he purchased the stock, merely to designate the variety in the nursery; at the same time intending to have it known to the pomological world as the Oswego Beurré, under which name it was first described.

The original tree was raised from seed by the late Deacon Walter Read, about twenty-four years ago. The facts, as gathered from Mr. Read's family, are, that he had a rich pear given to him by a friend that had but three seeds, which he saved and planted, two only of which came up; one of them was destroyed by cattle; the other grew up, and now stands where it was planted. It is said to have fruited when only six years old, and has continued to bear every year since, and one season produced *sixteen* bushels of pears. It is a very hardy tree, and holds its fruit well in severe gales, ripening

equally fine in cold and short seasons, when other fine varieties were indifferent.

Tree vigorous, of upright growth, yellowish wood, and rather small, ovate leaves.

Size, large, about two and a half inches long, and two and a half in diameter : *Form*, roundish obovate, largest in the middle, narrowing a little to the stem end, which is obtuse : *Skin*, fair, little rough, green, becoming greenish yellow when mature, and very slightly traced with russet : *Stem*, medium

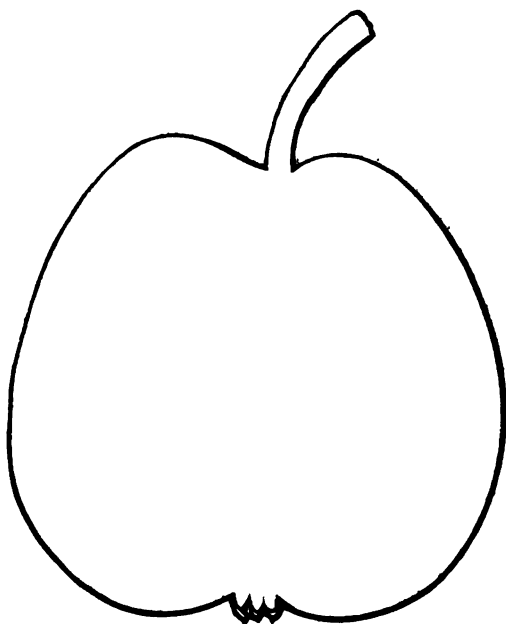


Fig. 34. *Onwego Beurre Pear.*

length, about one inch long, rather stout, curved, and inserted in a round, shallow cavity : *Eye*, medium size, partially closed, and slightly depressed in a shallow basin ; segments of the calyx short, stiff, projecting : *Flesh*, white, fine, melting, buttery, and juicy : *Flavor*, rich, sugary, and sprightly, with a fine perfume : *Core*, small : *Seeds*, small, plump, and very dark. Ripe in October, and keeps to December.

ART. III. *A few words about Strawberries.* By the EDITOR.

OUR readers must not infer, from the heading of this article, that we are about to discuss the old strawberry question, now so satisfactorily disposed of. Our intention is merely to make a few remarks upon the relative merits of some of the newer kinds, brought to notice the last few years, and to answer the inquiries of several of our friends, who wish to know our opinions in regard to them, and how far they are worthy of general cultivation.

Out of several of these letters we present only the following one, from our respected correspondent, Dr. Bayne, of Alexandria, D. C., whose remarks on the cultivation of strawberries have, from time to time, appeared in our pages, and who is not only an extensive cultivator of this fruit for the Washington market, but the originator of several seedlings. Dr. Bayne writes as follows:—

MY DEAR SIR,—In the constant accessions to your list of strawberries, have you yet procured one which can successfully compete with Hovey's Seedling? In reply, I think you will concede with me in saying, it stands yet unrivalled. Taking all its qualities into consideration, viz.,—size,—productiveness,—flavor, and beauty,—it must still be retained at the top of the list.

The Boston Pine has also continued to prove, with me, a very fine and productive variety. Some very eminent cultivators have asserted that no staminate variety merits a place in any fine collection, except as a fructifier. Notwithstanding, I pronounce the Boston Pine much more prolific than many pistillate varieties. In evidence of this position, I have this season counted, upon *single plants, sixty and upwards of fine, perfect berries*, and they have yielded, at *one picking, half a pint* of splendid fruit to the plant. This extraordinary yield was obtained from a bed highly cultivated, and from plants set out twelve inches asunder, and kept distinct.

If the Boston Pine only proved here, as it does with you, to be eight or ten days earlier than Hovey's Seedling, I would consider it the *most desirable variety yet originated*, at least so

far as my experience goes.—*Yours respectfully, J. H. Bayne.*
Alexandria, D. C., June 25, 1849.

It is almost unnecessary to say that this is the same opinion which most of our correspondents express in regard to our seedlings. FIFTEEN YEARS have passed away since they were produced, and among the *thousands of seedlings* raised in this country since 1834, not one of all that number, do we believe, can equal either of them. This may seem a bold assertion, and will undoubtedly be taken by many for what it is worth. Yet we will maintain its truth. We have no desire to overrate our productions. We are perfectly content to let them stand on their own merits. But when so many attempts have been made to laud worthless kinds above them, to the great disappointment and vexation of cultivators, we feel it no more than our duty to express our opinions freely, whether they may be thought warped by prejudice or not.

So far as we have any knowledge,—and if we are wrong, we shall be glad to be corrected,—we believe our seedling strawberries were the *first* ever produced in this country. But immediately after their introduction to notice in 1838, many amateurs and cultivators began to raise seedlings, and, up to the present time, an immense number has been raised in various parts of the country. Dr. Brincklé, of Philadelphia, raised and described upwards of *seventy*; Mr. Burr, of Ohio, upwards of a dozen; Mr. Buist, Mr. Prince, and others, have also produced seedlings. At least six or eight of all these possessed remarkable merit, and some of them were stated to far excel Hovey's Seedling.

For the sake of reference at some future time, we copy the following, from the descriptions or advertisements of three of these new strawberries:—

Cushing, (Brincklé's.)—Fruit very large, round, some of the berries with a short neck. This plant was exhibited at one of the meetings of the Philadelphia Horticultural Society, this summer, (1846,) with *twenty-six* fine berries on it, several of them *four and a quarter* inches in circumference. Not long since, Mr. Longworth, of Cincinnati, offered one hundred dollars for a strawberry with perfect anthers, that

will bear a full crop of fruit as large as Hovey's Seedling. Such a strawberry is, I think, the Cushing.

Buist's Prize.—This magnificent strawberry was grown from seed in 1842. In flavor it far surpasses Hovey's Seedling; every flower being perfect, it excels it as a general and constant bearer, is also earlier and continues longer in fruit, having upon the same plant, at the same time, ripe fruit and perfect flowers.

Burr's New Pine.—Compared with Hovey's Seedling, the New Pine is equal to it in average size, while it greatly exceeds it in productiveness, and especially in flavor. Fruit large, color pale red; believed to be the best strawberry cultivated.

Besides these, if we may believe the evidence of individuals "born in a garden," the "*Black Prince*" is, on the whole, the highest flavored and the best strawberry yet known in this country."

But, without occupying room in copying additional evidence of the supposed superiority of all the new kinds, let us see how the public, through our Horticultural Societies, regard the matter the present season.

In Philadelphia, the first prize was awarded to Mr. Joseph J. Hatch, for HOVEY'S SEEDLING, who exhibited only that variety and the Boston Pine. In competition, were the Black Prince, Burr's New Pine, and a dozen other sorts.

In Rochester, the first prize was awarded to M. G. Warner, for HOVEY'S SEEDLING, and the second to Lewis Burtis, for HOVEY'S SEEDLING. In competition, were the Black Prince, Burr's New Pine, Cushing, and a dozen others.

In Boston, the first prize was awarded to Josiah Richardson, for the BOSTON PINE; the second, to O. Johnson, for HOVEY'S SEEDLING; and the third, to Hovey & Co., for the BOSTON PINE.

These are the reports, so far as they have come to hand, and are but the repetition of the same thing, for a dozen years. And now Dr. Bayne's question may again be pertinently asked, "Have you yet procured one which can successfully compete with Hovey's Seedling?" Where are these noted kinds which were to surpass it? Why do they not take

the prizes? Why do they not appear at our horticultural exhibitions? Why are they not seen in our markets? This is what puzzles the amateur cultivator. He is desirous of adding all the fine sorts to his collection, and when he sees a flaming advertisement, or an editorial notice, setting forth a variety as surpassing Hovey's Seedling, he is willing to purchase a few plants at any price; but all—every one of them—have proved a failure; and, fearful of the same disappointment again, the numerous inquiries, similar to Dr. Bayne's, are made of us, as to what are real acquisitions to our list of strawberries.

The remarks already made, are our best reply. *We*, at least, know of no two varieties which will at all equal the Seedling and the Boston Pine. Four years ago, (Vol. XI, p. 294,) we stated this, and we have seen no occasion to alter our opinion. Others there are which are good—but we take it that this is not what the cultivator will be satisfied with. In a fruit like the strawberry, those kinds combining the merits of all others, are only wanted—and any thing less than this would be comparatively worthless.

In our remarks, we do not, of course, intend to include seedlings not yet brought to notice, of which there are thousands, and among them, perhaps, some which may prove better than any thing yet known;—it is only of kinds already in cultivation, that we refer to.

It has been stated, that no new variety of fruit should be introduced to cultivation, which does not possess some *one or more qualities* over those of the same kind, already known. This is perfectly true, and is just the principle we have adopted in the growth of any new fruit or flower. Let this test always be adopted, and then our catalogues will contain a far less number of comparatively worthless sorts.

But the question is, who is to be the judge of the qualities of a new seedling; it may be said, the producer is not, for he will be prejudiced in its favor. This we admit in most instances, for we have seen too many inferior productions palmed off as the best of their kind. An individual names a seedling strawberry, and without, perhaps, ever having had the true Hovey's Seedling, or seen it under good cultivation, he at once assumes that it is superior to that variety. But

there are exceptions to this rule, for we know that there are amateurs, as well as nurserymen, who will not let any thing go out under their name, which shall not come up fully to their descriptions, made with a full knowledge of the merits of *every* variety of the same fruit.

Let any cultivator cast his eye over the long list of "renowned" varieties of strawberries, as one of our nurserymen has described some of them, which have already become among the things that were; and we will venture to assert that, out of the very large number of seedlings of a more recent date, not one of them will be cultivated half a dozen years hence.

It is gratifying to know that, notwithstanding the small chance of obtaining new strawberries of superior quality, from seed, so much interest is manifested in their production. Many of our amateur friends, around Boston, possess a great number of plants, and our only hope is, that they may be repaid for their labor, by the fortunate discovery of at least one variety which shall eclipse any thing yet known.

ART. IV. *On the Cultivation and Management of the Ranunculus.* By DR. F. HORNER, Hull, near London. *With Remarks.* By the EDITOR.

Few flowers equal in brilliancy of color, or perfectness of form, the ranunculus, and the best evidence of its real beauty is the admiration which even a single bloom always excites wherever seen. We well recollect the delight with which every visitor viewed a small bed of these plants, which we were successful in blooming in our younger days, when we had more leisure upon our hands, and,—“no copy” to supply,—could devote a few spare hours to the proper preparation and careful management of a bed of ranunculuses, as well as many other of the florist's favorites. It is long since we have had a collection under our immediate care, but our admiration for it has not decreased, nor our desire to cultivate it in the least degree lessened. We hope soon, in common, we trust, with many of our amateur friends, to avail ourselves

of the good advice which we are about to lay before them from Dr. Horner, a very successful ranunculus grower, near London.

It cannot be denied that the ranunculus is, in some degree, a "capricious" flower; for we have seen many beds which would not afford sufficient bloom to repay for the labor of planting. But that this may not be avoided when its habits are thoroughly studied, it is idle to believe; for the art of cultivation has been carried too far to stop in this almost solitary instance of the ranunculus.

In our earlier volumes, (VI, p. 416,) we have already detailed our own experience in the cultivation of this beautiful flower; and later, our correspondent, S. Walker, Esq., has given our readers the results of his management, (X, p. 326,) which has been equally as successful as our own; both of these articles are of the highest interest to cultivators in our climate, which will not admit of precisely the same treatment as that of Great Britain. In connexion with Dr. Horner's advice, they furnish all the instruction needed to grow the ranunculus, with ordinary judgment and care, in as fine condition as the amateur could wish.

As the season is now close at hand when operations should be commenced, the amateur should lose no time in getting his bed ready, for it is on the proper preparation of the bed that success, in most cases, depends. This being done, the roots can be purchased at a leisure time before the planting season arrives. We can assure our floral friends no flower will give them so much pleasure as a bed of ranunculuses, and our only hope is, that the reading of the annexed article will prompt those who are admirers of all that is elegant in nature to secure a hundred or more roots:—

As the ranunculus will this month be in bloom, and consequently especially attract the attention of florists, I beg to offer a few remarks on its management.

This is indeed a flower of extraordinary characteristics, uniting in itself properties and endowments of rare and almost opposite combinations. For we may say of it, that it is grand, yet elegant; gorgeous, yet simple; dazzling to behold, yet lovely to look upon, &c. And assuredly its richly luxu-

riant and diversified foliage, bespreading the ground; its graceful flower-stem, erect and elegant, rising from the midst, and canopied with its symmetrical crown of bloom, of every tint and hue of color combined, intermingled, yet unconfounded and distinct, commands our preference and admiration. Nay, further, it may be observed, that, though the cultivated varieties of the ranunculus now amount to some thousands, yet all differ from each other in their marking or colors.

The circumstance of this flower not being universally grown by florists may be attributed to the uninviting character of its being a rather capricious flower; but rather it should be said, that it is one which will not do well unless it be suitably managed. There is little, however, really discouraging in this; for it will be found that nothing can be more simple and easy of fulfilment than the practice adopted by those who are uniformly successful in its cultivation.

The *Ranunculus asiaticus*, the variety grown in our gardens, is a native of the Levant, and of the natural order *Ranunculacæ* of Jussieu; and this circumstance at once aids us in determining the kind of soil and situation most suitable for it. The wild ranunculus, or buttercup, affects a cool, moist, and shaded locality; these conditions, therefore, it is desirable to realise in the culture of the garden variety. Hence it is indicated that the bed should be formed of a retentive soil, should not be in an elevated part of the garden, and not subjected to the hot rays of the mid-day sun. It may, moreover, be about four feet in width, and should have board, or slate, rather than box edging, that refuge may not be afforded to slugs, which often eat the newly-formed flower-bud. As the roots of the ranunculus strike deep, two and a half feet of soil is required.

The natural soil of the garden having been dug out, let it be replaced by a compound of pasture soil and cow manure. The surface-soil of a rich old pasture, well turned over and exposed to a winter's frost, and thoroughly enriched and uniformly incorporated with cow manure, not less than a year old, forms an appropriate compost; and by adding, year by year, about three inches of such manure to the surface, and digging it into the soil about a spade's depth, a fit medium for

their successful growth is perpetuated; and such is what I long practised and recommended. Sand should be added or withheld, according to the nature of the soil: if it contain a small portion naturally, it is the more suitable. A stiff or clayey loam (as in this neighborhood,) is too adhesive, and requires a considerable admixture of sand to moderate its stiffness; yet a light, sandy soil is wholly unfit.

I am anxious now, however, to make known a different method of preparing the bed, and one that I have found to be still more efficacious and satisfactory in its results; though the description may appear tedious, from a wish to be thoroughly understood, the actual labor is really very inconsiderable.

As soon as my tulips are taken up (for, from want of free accommodation, I have the bed so arranged as to serve the purpose of growing tulips and ranunculuses alternately), the soil is thoroughly dug over, and so left for some days. The surface being made even, it is then covered two and a half inches thick with perfectly fresh cow manure from the cowshed, and which is smoothed down with the spade, and allowed to remain thus exposed to the sun and rain till September. By this time, it will be found to be lessened in quantity, from the percolation and washing into the soil of the more soluble or fluid portions, as well as from the process of decomposition it has undergone.

It is now thoroughly and minutely chopped, or broken up with the edge of a sharp spade, or other instrument, and again left till October. At this period it is dug in, and well mixed with the top six or eight inches only of soil; that beneath being on no account disturbed, in order that it may retain its requisite firmness or solidity. It is once more turned roughly over in December, that it may be thoroughly acted on by the frost; and at the end of January, the surface is finally made even, and at the same time moderately compressed with the rake. As, whether this or any other method be adopted, it is highly beneficial that the top three inches of soil, in which the roots are set, and have to form their tubers, should not be too compact, I now cover the bed with about half an inch of sand, and by a free action with the teeth of the rake, thor-

oughly mix it with the surface soil, and leaving it perfectly smooth and even, plant the ranunculuses in the course of a week or ten days following. *St. Valentine* should be constituted the patron saint of ranunculus planting. The operation should on no account be deferred beyond the fourteenth of February. It is impossible to express too strongly the importance of early planting.

The method of planting the roots is of much consideration, as error in its performance is a very common cause of failure in respect to their flowering. It is the worst of practices first to plant them (after the manner of tulips), and then to cover them the requisite depth with soil. Nor do I recommend the setting of them in drills, as some excellent cultivators are wont to do; and especially if a light and different soil is placed in the drills in which the roots are to be set, and with which the drill is afterwards to be filled up. The soil should be uniform in texture, or mechanical properties, that the effects of general agents, viz., of rain, sun, drying winds, &c., be at least uniform. *Dibbling* the roots is the best, and is as far preferable to any other method, as is the dibbling of beans superior to drill sowing. Half a dozen holes may be made at once by means of an instrument similar to the head of a rake, having pieces of wood one inch and a half long (and covered with tin to lessen the adhering of the soil thereto) projecting from it, at the regulated distances of four inches; these being pressed into the soil, the holes are formed.

The practice, however, which I myself adopt and prefer is the following: Having marked out on the surface of the bed the situation of the rows, holding the root by its crown between the forefinger and thumb, and using the middle finger as a dibble, a hole is made by a downward and lateral pressure, about one inch and a half in depth; into this the root is inserted, or fixed, moderately firm, that the claws or tubers have hold of the soil. The whole being planted, the holes are filled up from the surrounding soil with the fingers, and then the surface is smoothed over with the palm of the hand. Strong roots may be planted about four inches apart; when they are smaller, it is desirable that two should be planted together, as all weak roots will not bloom, and it greatly detracts from the appearance of a bed to see occasional vacan-

cies. The rows also should be the same distance apart from each other as the roots are in the rows, viz., four inches. It adds materially to the general effect of a well-bloomed collection, to see this uniformity of space: a wide gap between the rows is unsightly, and, as I shall show, is not required for any one purpose—assuredly not for watering.

There remains but one other duty to be fulfilled, till the gorgeous period of flowering—and it is one of vast importance: when the plants have all appeared above ground, the bed must be covered, about an inch in depth, with sand; which, when the foliage expands, must further, by moderate compression and manipulation with the fingers, be carefully disposed also around the crown of the roots or insertion of the leaf-stalks. The sand serves the very important purpose of preventing cracking of the soil in hot, droughty weather; and this it accomplishes by its virtue of preserving it moist—a condition of it essential to success. It may further be added, that its application appears unpalatable to the disporting of those large worms, which often commit considerable mischief by forming wide holes amongst, and partially undermining the roots; such holes, moreover, are readily filled up by it: whilst old manure, used as a top dressing, rather encourages their gambols, and itself cracks also after having been wet, and is therefore less commendable.

But I now proceed to notice the most serious error in the management of the ranunculus—an error that is committed by all, and was by myself also until a later period; I mean artificial watering. *Let not one drop be given in hot, droughty weather.* I am aware that this will appear a “hard” saying, to florists; but of its justness, both experience, observation, and experiment have wholly satisfied me. The untoward results of watering the soil have been observed by every writer on the ranunculus; but its baneful effect of turning the foliage yellow has ever been attributed to a wrong cause, namely, to the “water falling upon the leaves:” hence the repeated injunctions, to be most careful to water only between the rows. In my experiments, it was always found as I anticipated, that less injury resulted to the foliage when water was cast over the whole with the rose of the watering-pan, than when poured only between the rows.

"Practical" men attribute the effect to the water "burning" or "scalding" the leaves, although the operation is performed at eventide. They reflect not that the smartest thunder-shower injures not a leaflet.

The reason why many plants suffer from being supplied with water during the continuance of hot, sunny weather, seems to be the absorption of a large quantity of fluid by their roots, and the consequent excited and increased exhalation of it by their leaves; which finally induces exhaustion of their functions, and death. Yet, there are peculiarities in many varieties of the *ranunculus*, in which watering seems to effect the injury in a different way. For I have observed that the foliage acquires, during the prevalence of hot, droughty weather, a peculiar, bright, shining, and polished appearance—a condition preventive of, and, indeed, a provision against, free exhalation. I conceive, therefore, that in such instances, the water, which is abundantly absorbed by the succulent roots, meeting a hindrance to its being freely carried off, a state of over-repletion is induced, and consequent decay. And this explanation finds corroboration from the fact, that the leaves and leaf-stalks are not in these cases dried up and withered, but are rather found in a condition of damp or moist decay. If, however, sand be employed as a covering in the manner I have pointed out, and the other conditions of the bed be attended to as before advised, as to the retentive nature of the soil, and its being left undisturbed from a few inches below the surface, artificial watering will be wholly unnecessary, and hence no extra space should be left between the rows, as previously shown, for such purpose.

When the plants are in flower, an awning should be erected, as in a tulip bed, to preserve them from the effects of the sun, rain, &c. As soon as the perfection of the bloom is past, let it be at once removed, and the bed freely exposed to the weather.

A most important operation yet remains to be stated—the taking up of the roots. If too long delayed, they again issue forth new fibres; an untoward circumstance, which either prevents their flowering the following year, or which destroys them altogether. On the other hand, if they are harvested too soon, the roots pine and shrivel, and bloom weakly; yet, of the two, this is the lesser evil. As soon as the

foliage, together with the flower-stems, have turned yellow and withered, they are ready for taking up; and, rather than any risk of their new growth should be incurred, it is better at once to remove those which present this appearance, than to defer the operation till the whole are ready. It is a useful and necessary precaution, when the weather, two or three weeks after their flowering, becomes warm and showery, to replace the top awning, leaving the sides exposed, as by thus keeping off the wet, their disposition to new growth is counteracted.

In conclusion, I may observe, that I was led to adopt the practice of using fresh cow-manure in summer, from having found that, when the soil of the bed was well watered, a short time before planting, with fresh liquid manure, the plants grew most vigorously. Since, however, it is somewhat troublesome withal, I adopted its application as now pointed out.

It will, of course, be seen that such method of using it is not the recommendation of fresh manure in which to grow the ranunculus, for fresh manures are wholly prejudicial to it. It is, in truth, no longer fresh manure in February; but the soil of the bed has become impregnated with *all* its invigorating properties—unwasted or dissipated by the long exposure and frequent turnings, &c., in the compost heap: the practice is as successful as it is sound in principle.

It will constantly be found, that in the case of those plants which do not bloom, but, on the contrary, that look dwindling and out of health, the soil around their crowns is loose; hence, it is absolutely necessary, at least twice during their growth, to compress it firmly with the fingers immediately around them. This looseness of soil is produced, in the first instance, by the protrusion of the abundant foliage, and, at an after period, by worms, which make their holes close to, or even in the midst of, the plants. Let it, then, ever be borne in mind, that this operation has to be performed as soon as the foliage has fairly appeared above ground; and again about three weeks afterwards, when it has obtained its full growth.

When circumstances will not admit of the bed being made in "a somewhat shaded locality," but, on the contrary,

where it is subjected to the rays of the mid-day sun, it is important that it should be formed lengthways, from east to west; as thus, by erecting a temporary side awning, or shade, along its southern side, there will be afforded to it the necessary and welcome protection from a scorching sun. Such defence will not, of course, be required at all times, or in all seasons; but during the continuance of sunny, droughty weather, its value will be fully appreciated by all who adopt it. To those who will have recourse to artificial watering in hot, dry weather, let this rule, at least, be imperative—never water the ranunculus bed without, at the same time, shading it; otherwise it is mere waste of labor, and *doubly* hurtful to the plants. The turning yellow of the leaves, I have previously shown, is, in nearly every instance, produced by the ill-judged practice of watering in hot weather; though, in a few cases, it is dependent upon looseness of the soil about the crown of the root; an event which is much more likely to happen when the tubers are planted in open drills than when they are set by dibbling, as I have recommended.

It is only in dull, cloudy weather that watering can be had recourse to with benefit and impunity; but advantage may always be taken of even a slight shower to apply it as abundantly as may be required. For at this time the *atmosphere* itself is in a kindred state—an harmonious condition now subsisting between the moistened earth and roots, the leaves and the surrounding air, wholly opposite to that which obtains in hot, droughty weather, on water being supplied copiously and artificially to the roots, whilst the leaves are exposed to a parching air—an *incongruity of which the ranunculus is especially impatient*. Watering is, moreover, a greatly unnecessary evil; for, if the bed be properly prepared, and a covering of sand be used, as before pointed out, and, it may be added, if the bed be shaded, as much moisture will be secured to the plants (since the roots of the ranunculus strike deep) as, under the conditions of the atmosphere, is suitable; and surely it is better to keep *in* the moisture than to apply it artificially. When the flowers are expanding, and the awning is erected, it is well to give the bed one rather plentiful watering, to enable the plants to support the great demand now made upon them.

No management, however judicious, can fully compensate

for an untoward and dry season; for the ranunculus delights in natural moisture; and if the flowers be not deficient in number, they will be so in size, color, or vigor. I recommend sand as a top covering for the soil of the bed, it being always at hand, and answering well the purpose of keeping in its moisture; but old tanners' bark, and especially, I would observe, moss, will prove excellent expedients. Moss, if compactly placed amongst the plants, would not only have a neat appearance, but would afford, perhaps, the most efficacious means of preserving the soil moist. Its value is fully attested in a recent number of the *Gardeners' Chronicle*, wherein, also, the evils of watering in hot, droughty weather, and the benefits of top-dressing, are judiciously insisted upon, in entire accordance with my own views and experience. Indeed, the spreading and luxuriant foliage of the ranunculus at once points out the utility of, and affords, a covering for the soil; and it was greatly on this account that I recommended that the wide distances between the rows should be abolished, and the roots set but about four inches apart.

P. S.—As many of the views in the preceding part of my last communication may be subversive of the opinions and practice of others, and hence, possibly, looked upon with some disinclination or distrust, I beg to detail a fact corroborative of their soundness and efficiency. The beds of five extensive, and usually very successful, cultivators of the ranunculus at this place, have this year, with one partial exception, proved an absolute and total failure—such was the continued hot, droughty weather during the whole of the critical month of May; whilst my own collection, treated as I have advocated, was one general mass of bloom; though, for the sake of severely testing one portion of my plan, no shading of the bed was resorted to; and yet the soil, an inch from the surface, indicated an almost sufficient degree of moisture. It may further be added, that one amateur (the partial exception alluded to,) who was induced to follow, yet but in part, my suggestions,—namely, by using (although but a little) fresh cow-manure in summer, and resorting to (though but to a thin) covering of sand, and refraining from watering,—had more and better flowers than all the remaining four cultivators conjointly.

ART. V. *On the Cultivation of the Pansy.* By Mr. TURNER, Chalvey, near Windsor. *With Remarks.* By the EDITOR.

(*Concluded from p. 316.*)

[By some oversight, the conclusion of Mr. Turner's capital article on the Pansy, in our last number, was omitted; but as the time was brought down to July, their treatment in the remaining months of the year will be just in time, though it would have been preferable to have had the article entire: our floral friends, however, must give us their indulgence for the error.—ED.]

AUGUST.

By this time the old plants that have been flowering for the last four months, will have lost their beauty, colors, and size. To make up for this, the young stock will now be coming in as a succession. The blooms of the latter will be small at first, but gather them until the plants are capable of producing them good in size and color.

Sow all the seed that has been saved up to this time, making use of fine light soil, either in pans or a raised bed; we place pit-lights over it, but open at the sides, the object being to protect the plants in a young state from heavy rain. When watering, be careful to do so through a fine rose. When the plants have several rough leaves, plant them in beds for blooming.

If mildew appear on any part of the stock, syringe the plants so infected, and shake black sulphur over them when in a wet state; care should be taken that the sulphur is shaken on the under part of the foliage. This pest generally attacks the oldest plants, and when this is the case, it will be most advisable to take them up and part them. The young shoots, with roots, should be dipped in water, after which cover them with sulphur, which can be done much more effectually when in the hand than when growing. Plant them out as stock plants, not to be watered over the foliage for a week at least; after that time, rain or watering will show that the mildew has been got rid of, and the plants will soon grow out of it.

SEPTEMBER.

All the seed that can be saved up to the middle of this month, from the first of August, should be sown as often as a sufficient quantity can be got together; but we recommend all that can be procured after that time (and there may be a considerable quantity) should stand over till April, and sown in pans, as before directed.

If pansies are grown successively on the same spot, a part of the soil should be removed, so as to introduce a good quantity of fresh earth. The best for this purpose will be the top spit of a meadow that has been laid up some time. Take care that it is free from wireworms, and commence at once, that the beds may be well prepared to receive the plants next month. (See instructions for March.)

Put in a liberal quantity of cuttings of good kinds at this time; place them in pots, and continue so to do for six weeks to come if a large increase is desired. Choose the young side shoots from healthy plants.

OCTOBER

Is the principal month for planting, and the sooner in the month it is done the better. Many defer it until November, but we should prefer the last week of September to the first week of November, because, if well established now, many advantages will follow. Full directions for preparing the beds, planting, &c., have been given in our previous papers. Choose healthy, vigorous plants, and not too large. Place a number in small pots for wintering, in cold frames; of the less valuable kinds, six or eight, in pots of a large size, will winter well, and take less room.

NOVEMBER AND DECEMBER

Is a quiet time with pansies. Those in pots should not be exposed to heavy rain; and those who have a number of small glasses will do well to place them over their best plants during a very wet time. Tilt the glasses on one side with a small flower-pot to prevent the plants from drawing. (See practice for January, to prepare for winter.)

CONCLUDING REMARKS.

We have been requested to state the best plans for keeping down insects. The greatest enemies to the pansy are the

wireworm and grub. If we have not cleared our soil of the former, previous to planting, we place pieces of potato or carrot under the surface, which should be examined two or three times a week, and all that have been attracted there destroyed. The latter are easily found when raking over the beds.

Slugs and earwigs are the most destructive to the *blooms*. If the former are numerous, it may arise from slovenly gardening;* weeds, and all kinds of rubbish, should not be allowed to accumulate. The surface of the soil cannot be moved by raking or hoeing too often, for more reasons than keeping insects under. Earwigs should be trapped on the plan adopted by the dahlia growers.

We have also been called upon to state what we consider the best number of blooms to exhibit. This must depend on the time of the year, and on this subject taste will vary—not that we hesitate to state our opinion. In the height of the pansy season, say any time in May, we recommend 24 for amateurs in 4 sixes, and 36 for nurserymen in 4 nines. So much can be said about stands for showing them on, that it must form a separate article, with plans and dimensions, as uniformity ought to be enforced by the different societies.

We recommend that it be made a rule that any stand containing a flower with two decided shades of ground-color, should be disqualified. A carnation with a run petal, would be fatal to the best stand ever put up, although this is a plant that produces but two to three blooms annually, at the outside; whereas the pansy has its hundreds, and should be subject to rules as stringent.

We hope those who grow for exhibition, and have attended to our directions, will be able to give a good account of themselves after the shows are over; but there is far more pleasure in witnessing a fine collection at home in their freshness, than in looking over the best exhibition of cut blooms.

* Though we are aware that in some situations they seem indestructible. It is a good plan to sow lime, slacked to a very fine powder, on the adjoining ground very early on a mild, damp morning. Those on the beds may be trapped with cabbage or lettuce leaves, which should be spread at night, and examined the next day.

ART. VI. *Floricultural and Botanical Notices of New and Beautiful Plants figured in Foreign Periodicals; with Descriptions of those recently introduced to, or originated in, American Gardens.*

CALIFORNIA PLANTS.—In our last number, we gave an account of several new annual plants introduced into the London Horticultural Society's Garden, by Mr. Hartweg, in his late expedition to California. In some prefatory remarks, we stated that we hoped our own government might do something towards exploring the botanical riches of the newly acquired territory of New Mexico and California.

Since then, we have noticed, in a late number of Silliman's *Journal of Science*, that Mr. Fendler has undertaken to make "Botanical collections in New Mexico and in the Rocky Mountains, and that the first part of the account of the plants already collected, with descriptions of the new species, critical remarks, &c., is printed as the first article of the fourth volume of the *Memoirs* of the American Academy, now in press; and separate copies (of one hundred and sixteen pages quarto) are distributed to the subscribers to Fendler's Collections. Several sets of the Santa Fe Collection, in specimens of unrivalled beauty and completeness, are still in the hands of Dr. Gray, at Cambridge, and of Mr. Heward, of London, who may be applied to for them. Mr. Fendler is now on his way to explore the great interior basin between the Sierra Nevada of California and the Rocky Mountains, especially around the Great Salt Lake, the Utah Lake, and the adjacent mountains. The collections are to be studied and distributed by Dr. Gray and Dr. Engelman, to whom those desirous to subscribe for them, should apply, and will be issued at the same price as the Santa Fe Collection, namely, at ten dollars per hundred specimens.

Mr. Charles Wright is also on his way from Texas, across to El Paso, on the Rio del Norte, a little below lat. 32°, in the vicinity of which he will collect, the present season, and another year extend his explorations into other parts of the country never yet visited by botanists. The price will be the same as that of the collections, and applications may be made to the same gentlemen.

New Seedling Epiphyllum.—Our correspondent, the Rev. P. S. Fall, of Frankfort, Ky., a zealous amateur, and successful cultivator of the Cactæ, has recently produced a splendid seedling epiphyllum. "The flower is, in color, like that of splendidum, but is fully *eight and a half inches in diameter*, and has, more decidedly than *Mayfly*, the beautiful purple [violet] tint of speciosissimus on the inner petals. The anthers are rose pink, on white filaments, and the style and stigma of a bright scarlet. It expands finely, and the petals are numerous, and about one and a half inches wide. In habit it resembles Jenkinsônia, while many of the stems—all of them at first—are like those of speciosissimus. I thought for some years it would prove to be a cereus. At the time of its flowering, Triumphans, Ashland, and Superbissimum, all superb sorts, as well as *Mayfly*, Mr. Longworth's fine seedling, Grahâmi, roseum, speciosissimus, &c., were in bloom; and, although no particular care had been bestowed upon the plant, the superior splendor of the flowers was at once evident to all who saw them."

Mr. Fall is desirous of disposing of his seedling to some person in the trade, as so fine a plant ought to be sent out; and any nurseryman wishing to purchase the stock, should address Mr. Fall, at Frankfort, Ky.

MISCELLANEOUS INTELLIGENCE.

ART. I. General Notices.

On keeping up a succession of Flowers.—To keep up a succession of flowers as long as possible, is one of the chief objects of a flower gardener. A parterre without blossoms is like an orchard without fruit; every expedient is therefore had recourse to for the purpose of retarding the flowering of some kinds, and expediting that of others. Our early spring flowers, which are chiefly bulbs and tubers, would be inclined to flower again in the autumn if they were not checked by the great heat of the summer in those countries of which they are natives; or, if in imitation thereof, the careful florist did not remove them out of the bed in which they have already flowered. Thus, by stopping their growth and keeping them in a colder and moister climate than their own, we keep them from blooming till the season when their blossoms are most welcome to us. In this way, many of these bulbous and tuberous-rooted plants can be flowered almost at any season; but there are rules of propriety in the execution of these proceedings: a snow-drop would scarcely be regarded at midsummer, while surrounded by so

many gaudier beauties ; neither would the tulip—that bright queen of the garden—look well amid the sober tints of autumn. Nature intends that her beauties shall be dispersed over the whole circle of the year, and the florist assists in this arrangement, and for this assistance claims for himself the privilege that she shall be, to a limited extent, subservient to him in some instances, while he encroaches upon her seasonal laws. The British florist has a peculiar claim to this privilege, because he has taken under his care the floral beauties of every clime in both hemispheres—affording to each, as near as can be, its natural temperature, its natural soil, and its natural rank and station among others. If, then, he should occasionally interfere with nature's laws in bringing forth flowers out of the season, he is not only excusable as their cultivator, but it is creditable to him as their guardian. To have them always in beauty, would diminish rather than advance them in our estimation ; but the recurrence of a flower when not expected—and especially if obtained without any derangement or mutilation of the plant operated upon—would be a delectable rarity, and really a desirable incident in the flower garden. Every one knows that transplanting rose-trees late, or pruning them late in the spring, procures a late bloom—three weeks or a month later than the usual time of flowering. I am speaking of the common Provence rose, though this treatment of rose-trees is less necessary now than it was before the introduction of so many French and Chinese varieties, some of which are always in flower during the summer and autumn months. The laburnum is a highly ornamental plant from the latter end of May to the middle of June ; if the flowering shoots be cut back, and the tree divested of its racemes of pods, it will again bloom nicely later in the summer ; indeed the whole of the Cytisuses may be made to flower twice in the summer, by careful cutting back after the first flowers fade. The rose, acacia, and several others of its congeners, will flower a second time ; and so will the *Althea frutex*, presenting its second flowers as late as October, when flowers of any kind are much wanted. Checking the growth of herbaceous border flowers, by transplanting, or by divesting them of a few of their stems, to delay the flowering, or only allow it to be developed gradually, is an old expedient ; and with attention paid to this management of perennials and biennials, and to the different times at which annual flowers may be sown, a continued display of flowers may be kept through the growing season.—(*Gard. Journal*, 1849, p. 387.)

Liquid Manure.—All gardeners may read with great advantage a leading article in the Chronicle of last week, on the proposed employment of the sewage of London for agricultural purposes. The immense benefits derived by growing crops from a discreet application of liquid manure, are there placed in a clear light, and we hope our amateur friends will act upon the principle stated in the sentence, “ what is true of a grass field is equally true of a cabbage garden, of celery, peas, lettuces, asparagus, and all kinds of garden stuff ” The inhabitants of large towns, having no gardens, are obliged to let the sewage made on their premises run away. But those who have any land to cultivate, should employ all the refuse of this kind at once, so as at the same time to benefit their crops, and prevent the existence of a nuisance.

What are called the slops of a large family, commonly produce a nuisance by being thrown into receptacles with more solid matters, where they are allowed to remain until a still greater pest is created by the necessity for removal; this is the ordinary procedure, except in cases where common sewers or dom-wells carry off such substances. It is obvious that these slops are highly fertilizing, and are capable of doing much good, either to fields or gardens, and we have for some time past employed them day by day, as they are produced, upon various horticultural productions. The pails are placed in a fixed spot by the housemaid, and the gardener applies the contents, either unmixed or diluted, as the case requires, in the course of the day. All the roses have had a plentiful supply more than once this season. Asparagus, peas, and strawberries, have evidently been benefitted by the application, especially the former, our practice being to pour some of the liquid on all the places from which stems have been cut, on the same principle as that indicated in the leading article above referred to, in relation to grass. We must quote a few lines of the passage, because they are so exactly applicable to our purpose. "Cultivators who know nothing of manure, except from the action of the solid, and sometimes not very useful, materials produced in farm-yards, cannot believe that half-a-dozen crops of grass per annum are possible, each heavier than the preceding. Nevertheless, such crops are attained by skilful men, and will one day be common. Liquid manure works the wonder." To say the least on the subject, whatever goodness exists in the slops is disposed of in the most expeditious and convenient way, and is made immediately available. The same observations apply to soap-suds made on washing days; these are never allowed by us to run to waste, but are at once applied where they seem to be needed. (*Gard. Chron.*, 1849, p. 389.)

Achimenes.—Few plants are more attractive than the different varieties of *Achimenes* now in cultivation, but they are seldom seen in that state of excellence which they are capable of attaining. It is customary to grow them in boxes, shallow pans, baskets, and pots, but I prefer the latter; for their bloom is soon over in shallow pans, baskets require too much looking after, and stiff unsightly boxes, which always meet the eye when looking at the flower, detract greatly from that imposing effect they create when properly arranged in pots, and trained in the way in which *Pelargoniums* are shown at Chiswick, only a little higher in the centre than the *Pelargoniums*, and allowed to drop a little over the edge of the pot. Nothing can exceed the beauty and elegance of *A. longiflora* and *patens* grown in this way. Instead of planting the tubers at first in small pots, and shifting them into larger ones as they advance in growth, as is commonly done, I use pots of 10 inches wide and 12 inches deep. After covering the bottom with a few crocks, I spread a layer of moss over them, on which I place 6 or 7 roots, and cover them slightly with a little leaf-mould, or well rotted cow-dung and sand. As the young shoots lengthen, more soil is added until the pot is filled to within 2 inches of the top, which space is afterwards filled up with moss pressed down firmly with the hand; the stems thus buried in the soil soon emit a profusion of roots which are never brought into action when the tubers are planted near the surface. I have had pots of *A.*

longiflora, measuring $2\frac{1}{2}$ feet high, and as much through, covered with bloom from the beginning of May to the end of September, and many of the flowers measured 3 inches in diameter.—(*Id.*, 1849, p. 389.)

Vines in Pots.—In the *Journal* of the 9th inst., you requested information on this branch of gardening. Whether there is any thing new or worthy of the attention of your readers, in the plan I am about to detail, I leave you to determine; I never saw it practised until tried by myself. There is not so much trouble attending it as in growing vines from eyes, especially where the forcing departments are small. At the winter pruning of the out door vines, (Royal Muscadine and Winter Frontignan,) I leave several young canes which spring from the lower part of the vine, and which are purposely retained at the previous summer dressing; these should be strong and well ripened shoots in April or May. I lay them in 11-inch pots, plunged level with the surrounding soil, and as close to the wall as convenient, and filled with good rich loam and deer dung in a rough state. I leave two eyes above the soil, and, as they both break, I rub off the weakest shoot, tying the one left to a stake, close to the wall. When they have reached the height of three or four feet, I begin making small incisions between the pot and the parent stem, which I repeat at intervals, as I find the vines are making roots, till they are finally severed from the parent about the end of July, or when the pots are getting full of roots. Watering with clear liquid manure must be attended to from the time growth commences, as keeping them moist accelerates their striking root. When they have made wood eight or ten feet long, they are kept stopped in, and when the first symptoms of maturity show themselves—which it will do about the end of August—they are taken up, carefully, lest the roots are injured, and potted in as large pots as may be convenient, the larger the better, using the compost already named. They are then placed in a south-east aspect, and kept rather dryer, which will, by degrees, bring them to a state of rest; whilst the roots will be laying hold of the new soil. As soon as the autumn rains set in, they are pruned to the length of five feet, and removed to an open shed where they are kept dry, till carried into the forcing house, where the treatment is in every way the same as for vines produced from eyes, which I need not recapitulate.—(*Gard. Journal*, 1849, p. 387.)

ART. II. Domestic Notices.

The Elton and Black Eagle Cherries.—The drought is making sad work with our fruit, more than decimating what escaped the blast. I refer particularly to pears, plums, and peaches. We have had a very heavy crop of cherries, and they have been very fine—the Elton, most delicious; the Black Eagle takes the lead of the black cherries, but I fear it will be an indifferent bearer, contrasting strongly in this respect with the Florence, which, on my trees, bears in such masses, that they nearly all rot before they are ripe enough to gather.—*Thy Friend, J. M. Earle, Worcester, July, 1849.*

Belle de Bruxelles Pear.—Permit me to say, that the Belle de Bruxelles, or Belle d'Aout, usually cultivated in New England, is not the same as that grown by Ellwanger and Barry, which they prize so highly. I have both growing in my garden. They are quite distinct. I have compared mine with trees from Col. Wilder, Manning, and other sources, and find none others like that from E. & B., but all of them like each other, having a more downy leaf than that from E. & B. It may prove, therefore, that Ellwanger and Barry's is the true one, and that it will be as good here as with them —*Thy Friend, J. M. Earle, Worcester, July, 1849.*

[We do not know how far Messrs. Wilder or Manning's trees are correct, but we know that our Belle de Bruxelles is the same as Ellwanger and Barry's, for we have seen the fruit of each, and examined the trees. Messrs. E. & B. sent specimens of the fruit last year to the Massachusetts Horticultural Society, for exhibition, and we had an opportunity to try them. We were satisfied, as well as the committee, of the identity with the pear cultivated under the same name in many collections around Boston. In some cases the Belle et Bonne has been received from France as the Belle d'Aout, and no doubt this has been often sold for it. The Belle et Bonne has a slightly downy leaf.—*Ed.*]

Munificent bequest to the Massachusetts Horticultural Society.—We learn that the Hon. Theodore Lyman, whose death took place on the 17th of July, at his residence, in Brookline, made some noble bequests of his ample wealth; among others equally liberal, TEN THOUSAND DOLLARS are given to the Massachusetts Horticultural Society; on what conditions have not been made known, but, undoubtedly, to be used in such manner as will best promote the interests of the society, of which he was an Honorary member.—*Ed.*

Horticultural Club at Flushing, L. I.—A Horticultural Club has been established at Flushing, the meetings of which are holden weekly on Saturday evening. The Flushing Journal, containing a report of the articles exhibited at the meeting, July 30th, has been sent us, from which, we notice that Messrs. Winter & Co. exhibited half a dozen bouquets, and Messrs. Parsons & Co. twelve varieties of cherries, and three bouquets.

Mr. Thomas McMinn, gardener to Mr. Wells, at Jamaica, carried off the palm of the evening. He exhibited eleven dahlias, and two superb petunias, one of which he has named Hovey, in honor of Mr. C. M. Hovey, of Boston; fourteen fine sorts of phloxes; sixteen of pelargoniums, &c. Mr. McMinn was highly complimented by the committee; all the articles exhibited by him proved his merit as a master of his profession. It is too bad that our gardeners should permit Mr. McMinn to run away with all the honors. Although we have among us all the material for a first-rate exhibition, we have our doubts whether any gardener can excel Mr. McMinn. (*Flushing Journal.*)

[We must return our thanks to Mr. McMinn for the compliment intended in naming his petunia after us, and we shall take especial pride in cultivating the plant which he has been kind enough to offer to send us. Flushing must indeed have lost its renown, as containing the oldest and most exten-

sive nursery establishments in the United States, to have all the prizes carried off by its neighbors from Jamaica.—*Ed.*]

Exhibition of Strawberries at Rochester, New York.—The following is the report of the committee, as published in the Rochester papers:—

Matthew G. Warner, Esq., presented thirteen varieties of strawberries, viz: Hovey's Seedling, Columbus, Ross's Phoenix, Black Prince, Boston Pine, Burr's old seedling, Rival Hudson, Hudson, Corse's seedling, Crimson Cone, Burr's New Pine, Early Scarlet, Austrian Scarlet; the Hovey's Seedling being entitled to the Society's highest premium for the best quart. Mr. Lewis Burtis presented Hovey's Seedling, fine specimens, entitled to the Society's premium for second best quart. Matthew G. Warner, Esq., entitled to Society's premium for the largest number of varieties, and best grown pint of each.

Messrs. Ellwanger & Barry presented Myatt's Eliza, Boston Pine, Early Scarlet, Black Prince, Burr's Seedling, and eight new seedlings, worthy the thanks of the Society, being a larger number of new seedlings than has been offered on any previous occasion. Your Committee think a premium ought hereafter to be offered for seedling strawberries of superior merit.

Mr. Charles Paulk, of Honeoye Falls, presented seven varieties of strawberries—Bishop's Orange, Black Prince, Prolific Hautbois, Stoddard's Alpine, Hudson's Bay, Boston Pine, and a new seedling. Messrs. Biseell, Hooker & Sloane, presented Burr's New Pine, Columbus, Burr's Old Pine, Black Prince, Cushing, Early Scarlet, Hudson, Rival Hudson, Boston Pine, and Hovey's Seedling.

It affords your committee pleasure to learn, that strawberries are receiving much more attention than heretofore. The above gentlemen, we are informed, have three acres in cultivation, and supply the market with several bushels daily.

M. B. Seward presented Aberdeen Beehive Strawberry. James H. Watts, Esq. presented splendid specimens of Northern Spy apples, in perfect order. Your committee beg to call attention to the lateness of the season for apples, the delicate sprightly flavor of the Spy up to the last moment that it can be kept. Newtown Pippin, and all the most celebrated dessert apples, having disappeared, leaving the Roxbury Russet chief competitor. Your committee think that after several years attention to the subject, that it is not exaggerating to say, the "Northern Spy" is the best and most beautiful dessert apple ever offered to your Society for competition, at so late a period as the 23d of June.—*P. Barry, Chairman of Committee. (Roch. Dem.)*

ART. III. *Albany and Rensselaer Horticultural Society.*

SECOND EXHIBITION FOR 1849.—The second exhibition of the society, held at the Agricultural Rooms in the Old State Hall, on Tuesday, the 3d inst., as will be perceived by the reports of the committees annexed, was, in all respects, such as to encourage its members to further efforts. The hall was opened to the public, at 1, P. M., and from that hour until

the close of the exhibition, was thronged with ladies and gentlemen from this city, Troy, and their vicinities.

At a meeting of the society, Joel Rathbone, Esq., its President, in the chair, the following gentlemen were chosen delegates to represent it in the North American Pomological Convention, which is to assemble at Syracuse, on the 14th day of September next, viz: From the county of Albany, J. McD. McIntyre, Herman Wendell, M. D., E. Emmons, M. D., B. P. Johnson, A. Osborn, and James Wilson; from the county of Rensselaer, V. P. Douw, Stephen E. Warren, B. B. Kirtland, D. Thomas Vail, Amos Briggs, and William Newcomb.

FRUIT.—The exhibition of cherries was large and fine, and the following were the exhibitors:—

By E. Warren, Esq., Troy, seven varieties of cherries, viz: Black Tartarian, May Duke, Elton, Early White Heart, Black Heart, Belle de Choisy, and Napoleon Bigarreau.

By J. McD. McIntyre, Albany, two varieties of cherries, viz: Tradescant's Black Heart, and May Duke, and also some very fine specimens of Lancashire gooseberries.

By Dr. H. Wendell, fourteen varieties of cherries, viz: May Duke, Waterloo, Elton, Napoleon Bigarreau, Florence, Wendell's Mottled Bigarreau, (unripe,) Belle de Choisy, Carnation Bigarreau, (a seedling,) Graffion or Yellow Spanish, Black Tartarian, Bigarreau Couleur de Chair, Large Red Bigarreau, Black Bigarreau, and a French variety, received without label, resembling China Bigarreau.

By V. P. Douw, Greenbush, two varieties of cherries, viz: Early Richmond, and Black Tartarian, very fine Whitesmith gooseberries, and Green Citron muskmelons.

By Dr. Kirtland, Greenbush, seven varieties of cherries, viz: Elton, Graffion or Yellow Spanish, Black Eagle, Black Heart, Honey Heart, May Duke, and a seedling resembling Transparent Guigne; eight varieties of strawberries, viz: Aberdeen Beehive, White Alpine, Hovey's Seedling, Black Prince, Ohio Mammoth, Sciota, Columbus, and Burr's New Pine. This exhibition of strawberries attracted much attention from their large size and beautiful appearance, and the committee cannot omit to add, that the further opportunity offered them to compare Burr's New Pine with other standard varieties, fully confirms them in the opinion expressed at the last exhibition, viz: "That it was entitled to the first rank, taking into consideration its many desirable qualities."

By Col. Rathbone, of Kenwood, a dish of very fine Red Antwerp raspberries. By E. E. Platt, of Arbor Hill, nine varieties of cherries, viz: May Duke, Black Heart, Black Tartarian, Graffion or Yellow Spanish, Black Bigarreau, and four varieties of seedlings, not fully ripe, but giving promise of superior qualities. By J. Teller, Greenbush, Napoleon Bigarreau, and Early White Heart cherries. By Dr. March, Albany, three varieties of cherries, viz: May Duke, Black Tartarian, and Black Heart.

PREMIUMS.—For the best and most extensive collection of cherries, to Dr. H. Wendell, \$3.

For the second best, to E. E. Platt, \$2.

For the best three varieties, Black Tartarian, Elton, and Belle de Choisy, to S. E. Warren, \$2.

For the best one variety, Black Tartarian, to E. E. Platt, \$1.

And the following discretionary premiums :—

For very fine Red Antwerp raspberries, to J. Rathbone, \$1.

For large and beautiful gooseberries, to J. McD. McIntyre, \$1.

For Green Citron muskmelons, to V. P. Douw, \$1.

For the committee, *John Wilson, M. D., Chairman pro tem.*

FLORAL DESIGNS, &c.—These were numerous and beautiful. Mr. Jas. Wilson was awarded \$3 for two fine bouquets. Dr. Wendell exhibited a fine round bouquet, and a basket of flowers, for which \$3 were awarded. William Newcomb, one flat and one round bouquet, \$2. Col. Rathbone, the President, and others, contributed to the display.

GREENHOUSE PLANTS AND FLOWERS.—Col. Rathbone, Dr. Wendell, James Wilson, W. Newcomb, Mrs. S. Waitt, and V. P. Douw, were the principal contributors. The following is the award of

PREMIUMS.—For the best varieties of fuschias in pots, to James Wilson, for Lady Millbank, Chauviere, Comet, Exoniensis, Caroline, and Acantha, \$2.

For the best six plants, of different varieties, in pots, to James Wilson, \$3.

For the best six varieties of carnations, to James Wilson, for Achilles, Euterpe, Cynthia, Brunette, Lady Peele, and Mirabelle, \$2.

For the best six varieties of picotees, to James Wilson, for Scarlet Flake, Flora, Eloise, Climax, Cleopatra, and Incarnata, \$2.

For the best display of annual and perennial flowers, to William Newcomb, \$2.

And discretionary premiums of \$2 to Joel Rathbone, Esq., for a fine display of growing plants and cut flowers.

Also, a discretionary premium of \$1 to V. P. Douw, Esq., for a beautiful display of cut roses, and other flowers. *W. Newcomb, Chair'n.*

VEGETABLES.—The committee respectfully report, that the contributions to the exhibition, were as follows :—

W. Newcomb, of Pittstown, Hoo-Sung, and very large and fine Silver-skin onions. Mr. Newcomb informs the committee, that he thinks the Hoo-Sung an excellent vegetable, and when cooked in the same manner as asparagus, is more palatable. V. P. Douw, of Wollenhook, Early Mohawk beans, fine Early York cabbages, and fine Blood beets. N. B. Warren, of Mount Ida, Troy, Marrowfat peas, very fine, and Mountain June potatoes, more fully grown than at the last exhibition. These potatoes were remarkable for size and healthiness of appearance. Joel Rathbone, of Kenwood, Hoo-Sung, and Early Mohawk beans.

PREMIUMS.—On onions, W. Newcomb, of Pittstown, \$1.

On Marrowfat peas, N. B. Warren of Troy, \$1.

On beans, Early Mohawk, V. P. Douw, \$1. *B. P. Johnson, Sec'y.*

ART. IV. *Answers to Correspondents.*

KNIGHT'S MONARCH PRAR.—*M. C. Johnson.* Knight's Monarch can be readily distinguished from the spurious sort, by the wood, the habit of growth, and the leaves. The *spurious* kind has dark purplish shoots, small leaves, and a straggling, irregular growth. The *true* kind has olive colored shoots, (inclining to yellowish,) medium sized leaves, and an upright and regular, though somewhat spreading, habit. The wood of the spurious sort is also more *wiry*, and shorter jointed, and less vigorous than the true kind. We have both growing among our specimen trees, and they can at once be distinguished from each other.

SUMMER PRUNING GRAPES.—*Allen Coffin.* The process of summer pruning is simple. If the spring pruning was properly done, and the shoots tied up to the trellis, all that is now required is to top *every* branch two eyes above the bunch of fruit, or the shoots that have no fruit, to about four eyes. This is premising the vines are pruned on the spur system. If on the long rod, or renewal plan, then all the shoots should be topped, *except* those which are to furnish the *shoots for next year*. This has only to be kept in view, no matter what form the vines are trained in. But all the laterals should be kept *topped* to four eyes or joints; if with fruit, then two eyes beyond the fruit. By attending to this, the vines are kept from becoming all matted together—the sun penetrates to the fruit—the air circulates freely, and ripens the wood—and there is an appearance of order and neatness, which should always attend good cultivation. Keep the branches, intended for next year's bearing, carefully tied in, as it checks the growth to have the ends of them broken off.

BEST TWELVE CAMELLIAS.—*An Amateur.* For a small collection, such as yours, twelve of the most desirable are Double White, Lady Hume's Blush, elegans, Landrethii, Henry Favre, candidissima, imbricata, Donckelsarii, Chandleri, Duchess d'Orleans, Eclipse, Amabile; these combining variety of color, of good habit and free growth.

STRAWBERRIES.—*J. S. C.* The first of September is early enough to plant a new bed: on old ground, such as yours, the best plan is to *renew*, and this should be done immediately, so as to allow the earth to settle. Trench two feet deep, and before planting cover the surface with *two inches of old well decomposed manure*, and dig it well in; then mark out the rows and plant. You need not doubt of the best results from a bed so prepared.

ART. V. *Massachusetts Horticultural Society.*

Meeting of the Society.—An adjourned meeting of the Society was held on the 10th of December at the Chamber of Arrangements, reported that

the same had been held for the purpose of any profit to the Society.

It was voted, that twenty-five dollars be paid to Mr. D. Haggerston, for superintending the semi-annual exhibition.

Mr. Jacques's *Treatise on Fruits* was presented by the author,—and the thanks of the Society voted for the same.

A letter was received from Dr. Brincklé, which was referred to the Committee on Publication.

Adjourned one week to July 7th.

Exhibited.—**FLOWERS**: From the President of the Society, a fine display of Prairie roses, three varieties. From Hovey & Co., thirty beautiful varieties of hardy roses; and several varieties of new Prairie roses. Cut flowers, roses, bouquets, &c., from M. P. Wilder, W. Kenrick, Messrs. Winship, P. Barnes, W. D. Winchester, A. Bowditch, S. Bigelow, J. Breck & Co., and others.

GRATUITIES AWARDED.

To Hovey & Co., M. P. Wilder, P. Barnes, and Messrs. Winship, a gratuity of \$2 each, for fine displays of flowers.

FRUITS: From J. F. Allen, Hoffman's Favorite, Geo. IV, Grosse Mignonne, and Yellow Rareripec peaches, all good; fourteen varieties of grapes—among which, were the De Candolle, Scharges Henling, and Wilmot's Black Hamburg; also figs. From O. Johnson, very beautiful Coolidge's Favorite peaches, and two baskets and six boxes of Hovey's Seedling strawberries, remarkably large and splendid specimens. From Jos. Richardson, four baskets Richardson's Late, and one each of Hovey's Seedling, Deptford Pine, and Jenny's Seedling. From J. Quant, Hautbois strawberries, very large and fine. From Hovey & Co., five varieties of grapes, including a splendid bunch of the Victoria, weighing 2½ lbs; also one large basket Hovey's Seedling, and one of Boston Pine strawberries. From A. Bowditch, strawberries. From J. W. Foster, Hovey's Seedling and Willey strawberries.

VEGETABLES: From S. Bigelow, by E. Burns, potatoes, the first of the season.

July 7th.—An adjourned meeting of the Society was held to day,—the President in the chair.

The following members were elected:—Thomas Rice, Jun., Newton Lower Falls; L. C. Child, East Lexington; James Huckins, Roxbury; Nicholas Delcor, and Z. B. Crooker, Brighton.

Mr. Breck, Chairman of the Committee of Arrangements, reported the proceeds of the semi-annual exhibition to be \$110 75.

Adjourned four weeks to August 3d.

Exhibited.—**FLOWERS**: From the President of the Society, Prairie roses and cut flowers. From Hovey & Co., fifteen varieties of Prairie roses, as follows:—Queen, Perpetual Pink, Superba, Baltimore Belle, Pallida, Caradori Allen, Miss Gunnell, Mrs. Hovey, Eva Corinne, Anne Marie, Jane, Pride of Washington, President, and Triumphant; also phloxes, Van Houtteii, Goethe, Standard of Perfection, Speculum, and amabilis striati-

flora. Cut flowers, bouquets, &c., from Breck & Co., W. Kenrick, Messrs. Winship, J. A. Kenrick, P. Barnes, A. Bowditch, Mrs. S. Spaulding, and others.

GRATUITIES AWARDED.

To Hovey & Co., for collection of Prairie roses,	\$ 2 00
To Messrs. Winship, for mantel bouquets,	1 00
To Miss Russell, for basket flowers,	1 00
To A. Bowditch, for hand bouquets,	1 00
To Miss Kenrick, for basket flowers,	1 00
To Breck & Co., Winships, and Miss Barnes, for cut flowers, each	1 00

FRUITS: From Hovey & Co., six varieties of grapes, and Boston Pine strawberries. From J. F. Allen, seven varieties of grapes; Violet Hative, and Lewis, and Late Crawford, and other peaches. From T. Needham, four varieties of grapes, including Cannon Hall Muscat. From O. Johnson, Black Tartarian, Bigarreau, Sparhawk's Honeyheart, and Bigarreau Col-eur de Chair, (!) all fine; also Jenny's Seedling strawberries, and Coolidge's Favorite peaches. From A. W. Withington, Seedling strawberries. From G. Merriam, Black Tartarian, and Hyde's Honeyheart cherries. From Jos. Richardson, Richardson's Late, and two other kinds of strawberries. From George Walsh, New Black Bigarreau cherries, fine.

VEGETABLES.—From James Parker, Champion of England cucumbers. From George Newhall, string beans. From James Nugent, string beans.

July 14th. *Exhibited.*—FLOWERS: From Hovey & Co., seven varieties of Prairie roses, viz., Mrs. Hovey, Perpetual Pink, Eva Corinne, Anne Maria, Triumphant, President, and Ranunculiflora; also carnations and picotees. Cut flowers in variety, bouquets, &c., from the President of the Society, P. Barnes, J. Hovey, A. Bowditch, C. A. Hewins, Messrs. Winship, and J. E. Swan.

GRATUITIES AWARDED.

To J. E. Swan, for a bouquet of native flowers,	\$ 2 00
To P. Barnes, for cut flowers,	1 00
To John Hovey, for hand bouquets,	1 00
To A. Bowditch, for hand bouquets,	1 00
To Messrs. Winship, for mantel bouquets,	1 00

FRUIT: From O. Johnson, Black Heart, Napoleon Bigarreau, White Bigarreau, and Black Tartarian cherries, all fine; also Black Hamburg, White Frontignan, and Zinfandel grapes, and Franconia raspberries. From T. Needham, Cannon Hall, and three other kinds of grapes. From J. F. Allen, handsome peaches. From E. Burns, Black Hamburg grapes, and fine gooseberries. From A. D. Weld, Red and White Dutch currants.

From Hovey & Co., Wilmot's Black Hamburg, Wilmot's B. H. No. 16, Black Hamburg, Golden Chasselas, Red Chasselas, and White Chasselas grapes. From H. Vandine, fine Elkhorn cherries. From H. K. Moore, Elkhorn cherries. From J. S. Sleeper, Florence, Black Heart, and Seedling cherries. From C. Newhall, Knevet's Giant raspberries. From Jos. Richardson, Richardson's Late strawberries. From J. Hovey,

gooseberries. From C. E. Grant, Fastolff and White Antwerp raspberries. From George Walsh, splendid New Black Bigarreau cherries.

The committee tasted the Cannon Hall Muscat grape, and pronounced it a "very fine" variety.

VEGETABLES: From Jos. Crosby, Early cabbages and cucumbers. From Q. Hersey, Hingham, string peas.

July 21st. Exhibited.—**FLOWERS:** From Hovey & Co., carnations and picotees, upwards of 200 blooms, in more than twenty-five kinds: The prize stand of ten flowers comprised Princess Victoria, Beauty of Cambridge, (Hovey's,) and four Seedling picotees, and King Alfred, William IV, Barker's Queen, and one unnamed carnation; also 20 varieties of double hollyhocks. From P. Barnes, picotees, hollyhocks, and other flowers. From J. Breck & Co., 20 var. double hollyhocks, and other flowers. Cut flowers, bouquets, &c., from the President of the Society, A. Bowditch, J. Hovey, E. Burns, J. Nugent, and others.

PREMIUMS AND GRATUITIES AWARDED.

CARNATIONS AND PICOTEES.—For the best ten flowers, to Hovey & Co., \$5.

For the second best, to J. Nugent, \$4.

For the best display, to Hovey & Co., \$3.

HOLLYHOCKS.—For the best display, to J. Breck & Co., \$3.

For the second best, to Hovey & Co., \$2.

For the third best, to P. Barnes, \$1.

GRATUITIES.—To James Nugent, for cut flowers and bouquets, \$1.

To A. Bowditch, for picotees, hollyhocks, &c., \$1.

To John Hovey, for bouquets, \$1.

To E. Burns, for bouquets, \$1.

FRUIT: From Messrs. Hovey & Co., Muscat of Alexandria, Wilmot's Hamburg No. 16, Black Hamburg, Wilmot's Hamburg, Muscat Blanc Hatif, White Frontignan, Red and White Chasselas, and Victoria grapes,—one very large cluster of which last weighed nearly *three* pounds. From O. Johnson, fine Fastolff and Franconia raspberries; White Dutch currants, and Seedling cherries, not ripe. From J. F. Allen, Cannon Hall Muscat, and White Nice grapes, and handsome peaches, the largest weighing half a pound, and eleven inches in circumference. From C. Newhall, Knevet's Giant raspberries: Mr. Newhall states, that the plants have stood out the three last winters, unprotected, without any injury. From Jos. Lovett, fine Knevet's Giant raspberries, and Red and White Dutch currants. From Jos. Richardson, Richardson's Late strawberries, and fine Franconia raspberries. From George Wilson, fine White Dutch currants. From A. D. Weld, Red and White Dutch currants. From J. S. Sleeper, Seedling cherries, which the committee pronounce fine. From S. & G. Hyde, Seedling cherries, also fine.

VEGETABLES: From Jos. Crosby, Early potatoes, very fine. From W. W. Wheildon, tomatoes, and Winter squashes.

July 28th. Exhibited.—**FLOWERS:** From the President of the Society,

Aconitum variegatum, *Yucca filamentosa*, &c. From J. Breck & Co., forty varieties of fine hollyhocks, several of phloxes, and other flowers. From P. Barnes, fine specimens of the Mountjoy Prairie rose, from plants distributed among the members two years ago; a desirable and pretty late flowering kind; also other flowers. Cut flowers, bouquets, &c., from M. P. Wilder, Messrs. Winship, Miss Barnes, J. Nugent, J. T. Buckingham, A. Bowditch, J. Hovey, J. G. Swan, Miss Russell, Miss Kenrick, and others.

GRATUITIES AWARDED.

To A. Bowditch, M. P. Wilder, P. Barnes, Breck & Co., J. Nugent, J. Hovey, Messrs. Winship, J. G. Swan, Miss Barnes, Miss Kenrick, and Miss Russell, for cut flowers, bouquets, &c., \$1 each.

FRUIT: From O. Johnson, Zinfindal, and Black Hamburg grapes, very fine, also Muscat of Alexandria; Franconia raspberries and White Dutch currants, both fine. From J. F. Allen, White Nice and Poiteau Noir grapes, also Violet Muscat (?) grapes, and nectarines. Currants, from A. D. Williams and A. D. Weld. From George Wilson, fine Victoria and White Dutch currants. From M. P. Wilder, Cherry currants, and Late Duke cherries. From J. Hovey and Jos. Lovett, fine gooseberries. From Hovey & Co., very large and fine Victoria currants; also White Dutch, and fine Victoria, and Wilmot's Black Hamburg No. 16 grapes. From W. C. Strong, five varieties of grapes, and Peach plums. From James Nugent, Black Hamburg grapes. From S. Dike, Seedling Mazzard cherries.

From R. S. Colt, Esq., Patterson, N. J., Muscat of Alexandria, Cambridge Botanic Garden, and Seedling grapes; the latter a hybrid between the Black Hamburg and Cambridge Botanic Garden grape; both were injured by transportation, but the committee thought favorably of the seedling. From Capt. Lovett, Seedling gooseberries, which produce well.

AWARD OF PREMIUMS ON FRUITS.

STRAWBERRIES.—For the best specimens, to Josiah Richardson, for the Boston Pine, \$6.

For the second best, to O. Johnson, for Hovey's Seedling, \$4.

For the third best, to Hovey & Co., for the Boston Pine, \$3.

CHERRIES.—For the best specimen, to G. Walsh, for a seedling, (?) \$6.

For the second best, to O. Johnson, for the Black Tartarian, \$4.

GOOSEBERRIES.—For the best specimens, to J. Hovey, \$5.

For the second best, to Jos. Lovett, \$3.

GRAPES.—For the best specimens, before July 1, to T. Needham, \$10.

For the second best, to J. F. Allen, \$7.

PEACHES.—For the best specimens, before the second Saturday in July, to J. F. Allen, \$6.

For the second best, to O. Johnson, \$4.

VEGETABLES.—From G. S. & A. Parker, fine potatoes. From A. D. Wilder, Sweet corn, cabbages, and potatoes. From J. Crosby, cabbages and cabbages.

HORTICULTURAL MEMORANDA

FOR AUGUST.

FRUIT DEPARTMENT.

Grape Vines, in the greenhouse or vinery, will now have their fruit well colored, and some of the earlier kinds nearly or quite ripe. The house should now be kept rather dry, and well aired, opening the sashes very early to let off the damp collected during the night. Continue to stop all the laterals, and to tie up all the leading shoots (if the vines are young,) to the trellis. Give the border a very liberal watering if this dry weather continues, and mulching with old stable manure will have a good effect. Old vines may be now inarched with young vines in pots. Grapes in cold houses must now be carefully managed, to prevent mildew; if, from any cause, it should appear, apply a solution of sulphur, as we have directed in previous years. Continue to lay in the wood wanted for next year on out-of-door vines, and stop all laterals and superfluous shoots.

Strawberry beds will need attention. Keep them clear of weeds, and lay in the runners, if they do not take hold freely. The last of the month is a favorable time to make new beds, if the young runners are sufficiently rooted. Now is a good time to trench ground for new beds. Now is the time to lay young runners into pots, for forcing next winter.

Plum, and Cherry, and Pear trees should now be budded without delay.

Fruit trees, of all kinds, should have their summer pruning finished this month. Attend to the destruction of insects, particularly the slug on the pear and cherry trees, and the green lice on the apple; oil soap, freely applied, will kill them off.

Peach trees in pots should be well watered, giving liquid manure to the youngest plants not in bearing, in order to secure a good growth.

FLOWER DEPARTMENT.

Dahlias will now require daily attention, if fine blooms are wanted. It is useless to expect *show flowers* unless they have good treatment. In this dry weather and hot sun, the ground should be liberally mulched with cow or horse manure, and a good watering given to the plants, *over the foliage*, every night. In addition, they may occasionally have liquid manure. Carefully tie up all branches, and trim away suckers and small shoots.

Pelargoniums, now headed in, should be kept in a half-shady place till well broken; water sparingly; cuttings, put in the middle of July, will now be rooting, and must be kept shaded in the middle of the day.

Carnations and Picotees should now be layered. Have some good, prepared soil ready, in order that the layers may root strongly, by which means a better bloom is secured for next year. Seedlings raised this year should be pricked out into beds, in order to get them strong enough to blow next year.

Camellias should now be potted, if not already done; this should not be

left too late. Keep the plants well syringed. Grafting may be done now, as well as inarching, and cuttings may also be put in.

Oxalis hirta and *Bowiei* should be immediately potted, especially the former.

Verbenas, for keeping over for winter blooming, or for a spring stock, should now be layered into small pots.

Chrysanthemums, in small pots, should be shifted into a larger size. Old plants may still have the tops of their shoots layered off.

White lilies should be taken up, divided, and reset the last of the month, if a large stock is wanted.

Cactuses may now be shifted into larger pots.

Pansies may still be propagated from cuttings. Seeds may be also sown now for spring blooming.

Mignonette, *Sweet Alyssum*, *Nemophila insignis* and *Schizanthus*, may still be sown for blooming in winter.

Callas should be potted the last of the month.

Ericas should be carefully looked after. If they need repotting, do the work at once. Cuttings put in in February or March, may now be potted off.

Japan lilies should be rather sparingly watered after they have done flowering.

Heliotropes, for early winter blooming, should now be shifted into larger pots.

Orange and Lemon trees should be budded this month.

Roses, of all kinds, should now have their layering finished. Budding may now be commenced. *Roses* in pots, wanted for blooming about Christmas, should now be shifted into larger pots, and headed in; water fortnightly, with liquid guano. Cuttings of all kinds of *Bengal*, *Tea*, *Noisette*, *Bourbon*, and *Hy*. Perpetual roses may now be renewed from cuttings.

Achimenes, for late flowering, should now be shifted into larger pots.

Fuchsias, in small pots, should now be shifted into larger ones.

Euphorbia jacquinaeflora should now be shifted into larger pots, and all the shoots topped, in order to make them dwarf and bushy plants.

Daphné odora cuttings should now be potted off; the old plants may also be shifted, if they require it.

Acacias, of all kinds, require a good degree of pot room, if fine plants are an object; water, also, with liquid guano.

Chorizemas may now be shifted into larger pots.

Antirrhinums should now be propagated from cuttings.

Coscombs, in pots, will need a shift into larger ones.

Oleanders, now in bloom, should be abundantly supplied with moisture.

Chinese primroses, of the double kinds, should be kept in a cool frame shaded from the noonday sun. Seedlings, in small pots, should now be shifted into larger size.

Greenhouse plants. Continue to look after them now, and repot and prune all such as require it.

THE MAGAZINE OF HORTICULTURE.

SEPTEMBER, 1849.

ORIGINAL COMMUNICATIONS.

ART. I. *Beautiful Native Trees, Shrubs, and Herbaceous Flowering Plants, growing in Massachusetts, worthy of general cultivation.* By GEN. H. A. S. DEARBORN, Hawthorn Cottage, Roxbury.

DEAR SIR,—Since my letter of July, it has occurred to me that there are several other native trees, shrubs, and herbaceous flowering plants, which are as much entitled to the special attention of the cultivators of ornamental grounds and nurserymen, as those I named.

The Tupélo *multiflora*, or *aquática*, which in New England is called Pepperidge, Swamp Hornbeam, Wild Pear, Snag Tree, and Horn Pine, is a very picturesque inhabitant of our forests, as the branches are numerous, close together, horizontal or slightly drooping, and the leaves which are of a glossy green, until autumn, when they change to a deep scarlet or crimson tint, and the berries are blue. They attain a height of from thirty to forty and even fifty feet, and isolated, or mingled with other trees, it is worthy of culture, from its unique ramification, foliage, and form. Mr. Emerson describes one of these trees, which he examined in Cohasset, that, at the surface, just above the roots, was eleven feet in circumference, the height forty or fifty feet, and the average breadth of the head sixty-three feet.

As I shall designate only such trees and plants as are to be found in this State, as most worthy of your notice, allow me to name two of the former, which are limited in their range and consequently not generally known. They are the Hack

Berry,—*Celtis crassifolia*, and the Overcup White Oak,—*Quercus macrocarpa*.

The former, Michaux describes as "one of the most beautiful trees of its genus, and one of the most remarkable for height and majesty of form." Mr. Emerson states that he found it in only two places,—Springfield and West Springfield. The most remarkable specimen grew a few rods north of the Hampden House, and at six feet from the ground was thirteen feet in circumference, and was fifty or sixty feet in height.

The Overcup White Oak, or Bur Oak, is found in Stockbridge and other towns in Berkshire County, where it is called Pin Oak, from its being preferred to any other material for pins or treenails. Mr. Emerson truly remarks, that "the beauty of this tree, the abundance and luxuriance of its foliage, and the extraordinary size of its acorns, recommend it to the landscape gardener, and the value of its wood to the forester."

The *Magnolia glauca*,—Beaver Tree, or Swamp Laurel, is not found in this State, except in Gloucester and Essex. All who have seen this superb tree must unite in this just encomium of Emerson:—"No plant is, at every season, and in every condition, more beautiful. The flower, two or three inches broad, is as beautiful and almost as fragrant as the water lily."

There are only fifteen species of this magnificent genus of trees, and nine of them are natives of the United States; five of the others are indigenous to China and Japan, and one to the West Indies.

Several of the *Magnolia*, besides the *glauca*, can be reared in our climate. The *Magnolia grandiflora*, or Big Laurel, is one of the largest forest trees of this country, as it sometimes attains the height of ninety feet, with a diameter of three feet.

The *Magnolia tripétala* is found as far north as Lake Champlain, in the state of New York, and has been long cultivated in the vicinity of Boston.

This elegant family of trees received its name from Plumier, in honor of Peter Magnol, the celebrated botanical professor of Montpelier, in France, who died at the commence-

ment of the last century. He was a physician of extensive practice, but assiduously cultivated botany. Numerous students sought instruction from him, in that pleasing and useful branch of natural history. Fagol and the illustrious Tournefort were his pupils. He published several works on botany before the birth of Linnæus, and was one of the great pioneers for that eminent author.

The six species of the *Viburnums* are all very appropriate for the borders of groves, and other portions of embellished grounds, from their profuse cymes of delicate flowers and deep green and abundant foliages. Some of these shrubs are known in the country as White Rod, Arrow Wood, Cranberry Tree, and Wayfaring Tree.

The Cardinal Flower,—*Lobelia cardinalis*,—is the unrivalled queen of our herbaceous plants, for its long raceme of brilliant scarlet blossoms is so intensely vivid in color, that, in the bright sun-light, it seems to flash like the scintillations of a flambeau. Although its natural position is in moist land, and usually on the margins of brooks, it flourishes, by culture, in elevated situations, and should be in every garden, it being perennial.

The Marsh Hibiscus,—*Hibiscus palustris*,—is one of our rarest and most conspicuous native flowers, for the corolla is larger than that of any other indigenous plant, it being equal in size to those of the hollyhock, and of a superb purple tint. This is also a sub-aquatic plant and perennial, but can be reared on high ground. Some twenty-five years since, I found the first of these plants I had ever seen, in a swamp, at the head of Tarpaulin Cove, on Nashawn island. It was in bloom, and I had it taken up with a large quantity of earth and thus transplanted it to my garden. I first, however, divided the roots, and sent half of them to that ever honored and distinguished benefactor of rural industry, John Lowell, Esq., who reciprocated the favor, by presenting me an exotic white species, with a dark eye. I set it out beside the wild plant, and the next season, when they were in bloom, I cut off one of the white flowers and inverted it over one of those on the native plant, for the purpose of obtaining a hybrid variety; when the large pericarp was matured, the seeds were carefully preserved and planted the next spring.

I raised about forty plants, and they were of all the shades of red, from nearly white to crimson, and each had the dark spot of the white kind.

No one is more disposed to commend the meritorious efforts which our nurserymen and numerous amateurs have made, to multiply our varieties of fruit and ornamental and useful trees and plants, by importations from all parts of the globe, for they are entitled to the gratitude of their countrymen. Still, it is very desirable that all our native species, which are worthy of culture, should claim at least equal attention, and I think the first; for how peculiar and extraordinary would be considered a visit of an American to Europe, for the purpose of beholding the lakes of Switzerland and Scotland, the Rhine, the Rhone, and the Danube, and the cascades of Italy, before he had traversed our own inland seas, and the majestic rivers, Ohio, Mississippi, and Missouri, and stood on the brink of the thundering cataract of Niagara.

Let us first look at home, and direct our attention to the beautiful, the grand, and the valuable, and endeavor to procure afterwards whatever may be found better or useful in other regions of the earth.

Hawthorn Cottage, Roxbury, August 23, 1849.

No individual in this country is so well acquainted with the merits of our native trees, shrubs, and plants, as adapted to ornamental planting, as Gen. Dearborn. He has seen and studied them in every locality, and we only hope he will continue to give our readers a further account of these native trees, of which the few he has named only form a small portion, which deserve to form a prominent feature in every ornamental plantation.—*Ed.*

ART. II. *List of American and Foreign Varieties of Pears which succeed on the Quince.* By W. REID, Elizabethtown Nursery, N. J.

DEAR SIR,—A remark made at the Fruit Convention, held at the city of New York, last October, by one of our leading

nurserymen, relating to varieties of pears that succeed on the quince stock, has induced me to send you, for publication in your Magazine, a list of some of the varieties that grow well with me. The remark that I allude to, was, that there were very few of the American varieties of pears that would grow on the quince, except Dearborn's Seedling.

I trust the annexed list, which contains only a few of the leading kinds of American origin, and some of the new European varieties, may be of some use to those who are budding on the quince, and also to persons purchasing trees, who may be desirous of having their collection all on Dwarf stocks.

AMERICAN VARIETIES.

Andrews,	Pratt,
Columbian Virgoulouse,	Seckel,
Swan's Orange,	Stevens's Genesee,
Lawrence,	Cushing, &c.
Oswego Beurré,	

FOREIGN VARIETIES.

List of new European varieties, principally of French origin, and of great celebrity in that country, and of which some very high testimonials have been sent here with them. Those who are anxious to see the fruit as soon as possible, will be gratified to learn that they may be enabled to do so by working them on the quince:—

Beurré de Malines,	Fondante de Malines,
Beurré d'Esperin,	Soldat d'Esperin,
Beurré de Kackingheim,	Cheminette,
Beurré Langelier,	Chenille,
Beurré de Spoelberch,	Surpasse Fortunee,
Beurré Giffart,	De Lepine,
Beurré Duvernay,	Bergamotte d'Esperin,
Doyenné Goubault,	Elize d'Heyst,
Duchess of Orleans,	Crassane d'Hiver,
Belle Excellente,	Gratioli, of Jersey,
Neil d'Hiver,	Delices de Charles,
Louis de Boulogne,	Doyenné Goubault,

Benoist,
 Belle Apres Noel,
 Arch Duke Charles,
 Bonne de Zees,
 Hispeteau,
 Beurré Durfour,
 Colmar d'Aremberg,

Catinka,
 Nouveau Simon Bouvier,
 Triomphe de Jodoigne,
 Beurré Sterkman,
 Theodore Van Mons,
 Arbre Courbe, &c.

Elizabethtown, August 9, 1849.

We are glad to hear from Mr. Reid, on this subject, which is of great importance to all nurserymen, as well as amateur cultivators; for it is well known that some kinds of pears will not succeed upon the quince, for any length of time, and the trees often die off just as a good crop of fruit is anticipated. Nothing is more vexatious, to say nothing of the loss of time and disappointment, than to have two or three out of a fine row of twenty-five or fifty handsome *pyramidal* or *quenouille* trees die out, thus destroying the regularity and symmetry of a plantation. We have ourselves experienced this, and our desire is to guard others against such effects. For this reason, we have made, and have still in course of trial, a number of experiments to ascertain all the kinds of pears which will thrive well with the quince.

We are pleased, therefore, to give the annexed list, by Mr. Reid, who is a careful and observing nurseryman, and we should place great reliance upon his experience, when *time* has allowed a fair trial. But, as regards new sorts, such as the Pratt, Oswego Beurré, &c., introduced altogether too short a time to test their growth on any stock, Mr. Reid's advice should be taken with some caution.

Notwithstanding Mr. Reid's remarks, we still adhere to the opinion he has quoted, viz., that "very few of our American pears appear to succeed well upon the quince."* We believe we made this observation ourselves, at the Convention of Fruit Growers, when called upon to give some information about the Dix pear. We have now above *seventy* varieties of American pears, and of all this number, not more than ten

* We did not say "that double-worked pears do not succeed well for any length of time," as is incorrectly reported in the *Proceedings*, published by the Convention.
 —ED.

or twelve have been long enough cultivated to ascertain with certainty whether they will succeed on the quince. By certainty, we mean whether they will make good sized trees, and bear one or two good crops, without impairing their health and vigor. The Seckel will succeed on the apple for a year or two, and then it dies out. Of Mr. Reid's list, only the Andrews, Seckel, Stevens's Genesee, and the Cushing, have been introduced a sufficient time to test their growth. We have not been able to make the Seckel grow well on the quince, though it may do so. With the exception of Swan's Orange, we have not tried either of the others. Two years grafted trees of the former look exceedingly well, and we hope they will continue to thrive. The Andrews and Columbia are very poor growers, even on the pear.

We should be pleased to know that every pear, American or foreign, would grow well on the quince, for we think that the most desirable stock for all purposes but orchard culture; and we trust that every nurseryman, and, indeed, every amateur, who has any experience on this subject, will communicate to us the results of their experiments. By this means, a fund of valuable information may be secured, and, by comparing results, a list made out of such sorts as grow well on the quince, which will be a safe guide to all who are propagating trees for sale, or for their own gardens.—ED.

ART. III. *Some account of a New Seedling Cherry.* By HENRY VAIL, Esq., Troy, N. Y., in a letter to the Massachusetts Horticultural Society. *With a description and engraving of the Fruit.* By the EDITOR.

THE following letter was communicated to the Massachusetts Horticultural Society, at a late meeting, by Henry Vail, Esq., of Ida Farm, Troy, N. Y., with specimens of the cherries for trial; and it has been kindly furnished us for publication by the president, Samuel Walker, Esq. The cherries, when they came to hand, were somewhat injured by carriage, and a just estimate of them could not be made by one trial. The variety appears to be equal to the Late Duke

in quality, and being a native seedling it may be better adapted to our climate than foreign kinds, and deserves further trial. A few of the cherries were placed in our hands, from which we have made the annexed engraving and description of the fruit.

Mr. Vail's seedling belongs to the class of late subacid cherries, of which we now have the Arch Duke, Late Duke, Lemercier, and Belle Magnifique, all large and fine kinds; what particular merits it possesses over these, one trial does not give us an opportunity to decide. But its American origin must give it a hardy habit, which, combined with productiveness, size, and good quality, will render it a desirable acquisition.

MY DEAR SIR,—I take the liberty of sending you, per express to-day, a few specimens of a seedling cherry which originated on my place. The tree from which I send the fruit is now seven years old, and, in its habit, very nearly resembles the Late Duke. It appears to be very prolific, the fruit growing in clusters, and is now just in perfection, although the tree stands very much exposed, being in a position to receive the rays of the sun from early day to its setting.

A. J. Downing, Esq., to whom I sent a few specimens of the fruit, writes to me under date of 7th inst :—"I am really much obliged to you for a sight of your new seedling cherry, which I am greatly pleased with. Indeed, if this variety continues to prove itself as good a bearer as these branches before me indicate, it will be a great acquisition. It very nearly resembles the Late Duke in appearance and season of ripening, but it is a better cherry and a far more prolific one, as the Late Duke is such a poor bearer that it is very little cultivated. I have made a drawing of the specimens sent, and will be glad to notice it in the Horticulturist. What shall I call it? Perhaps *Vail's August Duke*."

As I should be pleased to have the fruit examined by yourself and the fruit committee of your truly valuable society, I take the liberty of sending to your address a few specimens, which I hope will reach you in good order, and in season for your exhibition on Saturday next, and shall be

pleased to hear from you whether it passes the ordeal of your discriminating committee.—*Truly yours, Henry Vail, Ida Farm, Troy, N. Y., August 9, 1849.*

TO SAMUEL WALKER, ESQ.,
President Mass. Hort. Soc., &c.

The fruit committee of the Massachusetts Horticultural Society reported that the "cherries were somewhat decayed, and they could not so well judge of their quality, but, from their being so late, and said to be an abundant bearer, the cherry promises to be a valuable acquisition."

Our description is as follows:—

Fruit, large, fully one inch in diameter, and about the same in length: *Form*, roundish, heart-shaped, slightly flattened at the base: *Skin*, deep shining red: *Stem*, very long, about two inches in length, rather stout, and inserted in a medium sized shallow cavity: *Flesh*, pale amber, tender, and melting: *Juice*, abundant, subacid, rich, and good: *Stone*, small, ovate. Ripe in the early part of August.

Mr. Downing, in his letter to Mr. Vail, speaks of the Late Duke as such a "poor bearer that it is very little cultivated." Does he here have reference to the *true* Late Duke, or to a *spurious* one which we had from the Highland Horticultural nurseries six or seven years ago, and which appears to be some sort of a Morello? The true Late Duke, as figured in our *Fruits of America*, and described in our *Magazine*, (vol. xiii. p. 397,) is a great and constant bearer, and one of the very finest late cherries in our collection. We have had it in bearing three or four years, and the *Pomological Magazine* particularly recommends it on account of its "appearance, size, flavor, and productiveness."—*Ed.*

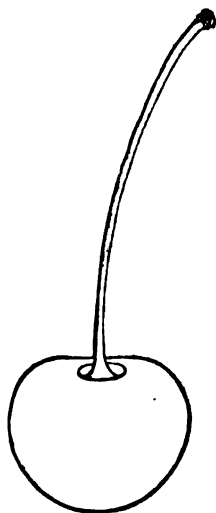


Fig. 35. Vail's Seedling Cherry.

ART. IV. *Notice of a fine and showy species of Cowparsnep.*
(*Heracleum Wilhelmsii.*) By JOHN LEWIS RUSSELL, Prof.
Bot. and Veg. Physiol. Mass. Hort. Soc., &c., &c.

IN 1844, Professor Fischer, of the Imperial Botanic Garden at St. Petersburg, forwarded to the Massachusetts Horticultural Society a collection of seeds, out of which I was so fortunate as to raise the interesting subject of this article. The seeds were sown in April of that year, but the plants did not make their appearance until the following Spring. In June, 1846, *two* surviving plants, out of the only *three* which vegetated, produced flowers; and for the successive seasons have rendered themselves eminently conspicuous for magnitude of dimensions, as well as for elegance of style in inflorescence.

Any one who is familiar with dark, shady, and rich woods on rocky soils in this vicinity, must have frequently noticed, in the month of June, a tall plant, with coarse, downy foliage, commonly known as cowparsnep, and incorrectly called by some, "master wort." Passing through HARMONY GROVE, in which the cemetery grounds of Salem, Massachusetts, are located, early in that month, my attention was arrested by a fine natural groupe of these cowparsneps, covering the shelving sides of a slope, and giving to the spot the air of some exotic culture. The peculiar beauty which this otherwise coarse plant threw around the scene, suggested to me that some of its foreign co-species might, perhaps, be worthy of cultivation, as well adapted to cover such grounds which are often filled with unseemly briars. I wished that I could have seen, at the time, the Siberian species, which, of the *foreign species*, is the only one known to me, and which, as an object of curiosity, I shall attempt to describe.

Heracleum Wilhelmsii (*fide* Fischer,) is a very showy plant, growing to the average height of about five feet, with large umbels of numerous snowy white, rather small, flowers, and with enormous leaves. Of these latter, I have specimens before me, cut from the two plants above-mentioned, which have been growing in a rich, stony soil, on the edge of a peat meadow, and under no especial cultivation. One of these leaves measures, from the base of the petiole to the

tip of the leaf, five feet and ten inches in length, and its greatest breadth is that of more than four feet. The other leaf, cut at random, was five feet in length, measured in the same way as was the last. The petiole is hollow, stout, and longitudinally grooved, smooth, irregularly marked with dark red spots and dashes, and highly scented (as is indeed the entire plant) with a strong anisate odor, rather too pungent to be entirely pleasant. Each leaf is pinnate; the two lower pinnæ being also petiolated, the two next above, sessile; while the two upper become connate with the odd leaflet which terminates the leaf. Each leaflet or pinna is deeply gashed or cut into; and is subdivided many times by similar incisions on the edge of each subdivision. The color is of a deep, rich and dark-green above, much paler beneath, and very strongly veined. At the joints and nodes of the entire plant are delicate glass-like hairs, which, when immature, as for instance on the young foliage, are straight, stiff, and very conspicuous, but become less so, and, indeed, turn to a curled appearance, or into a sort of wool or down.

From the bosom of several of these noble leaves, one or several main flower-stalks ascend, bearing modified leaves of the same general character, but towards the top having at their bases *ochreae* or sheaths, forming the involucrel investment of the unexpanded umbel. As the main umbel expands, several partial ones are extended from beneath the uppermost, which give a succession of flowers after the head has passed out of blossom. Each blossom consists of five white petals, two of which are longer than the other three, and are divided into two very unequal lobes. The stamens are five in number, and the styles are two, all situated about a disk, which crowns the seed vessel. This little blossom, it is to be observed, is pedicellate, and is clustered, with several others, into a partial umbel, which umbel is again supported on another longer and larger pedicel, as is the character, indeed, with the generality of the umbelliferous plants. The heads of blossoms of these flowers will measure across from one to two feet, and become by mere aggregation very showy.

Notwithstanding its strongly aromatic scent, the plant is freely visited by numerous sorts of insects, such as bees, flies, cantharis, &c.; though I have noticed no special injury that

they inflict. On the ripening of the fruit, as the seed is technically called, a curious cimex is found among dried umbels, which so nearly resembles the seed as to look like an animated seed, there being two parallel dark lines down its back, similar to the vittæ of the fruit.

The *Heraclea* seems to be numerous in species; and, in a catalogue of seeds of the St. Petersburg Botanic Garden, five species are noticed besides the *Heracleum sibëricum* L.; and all may be as remarkable for some prominent quality as is the *Heracleum Wilhëlmsii* for its speciousness. Loudon, in his *Encyclopædia of Plants, &c.*, enumerates some ten species; and Burnett, in his *Outlines of Botany*, assures us that "the Kamschatdales and Russians eat the young shoots and leaf stalks of *Heracleum sphindylium* after the rind, which is acrid, is peeled off. This species is considered very nutritious, and large bundles of it are collected and dried, during which operation the stalks become covered with a saccharine efflorescence, which is considered a great delicacy. To what use our present plant, or even the common native species, (*Heracleum lanatum*,) can be applied, I am unable to say.

The delicate hyaline structure of the hair or down, investing the joints of the stalks and petioles, affords an excellent subject in which to observe the spontaneous movements of particles of matter (*chlorophyll*,) in the interior of each hair.

This phenomenon was once considered as only occurring in very rare instances; but many plants have been ascertained to exhibit this gyratory and circulatory motion of corpuscles within their cells. In the present instance, I have found both motions, viz: a current of larger particles floating within a turbid fluid, and myriads of others, of a medium size, rotating on their axes, and resembling those animalcules known as *monads*. To the microscopist, this feature of the plant would, doubtless, prove interesting.

Having on hand some fresh seed of this present year's growth, it shall be at your disposal, Mr. Editor, should you deem it worthy your acceptance.

South Hingham, July, 1849.

ART. V. *Floricultural and Botanical Notices of New and Beautiful Plants figured in Foreign Periodicals; with Descriptions of those recently introduced to, or originated in, American Gardens.*

NEW PHLOXES.—Some time since (p. 220,) we mentioned the names of several new phloxes which have recently been introduced; since then nearly all have flowered in our collection, and we have made descriptions of each, which we shall present to our readers in a future number. Some of them are exceedingly beautiful and distinct:—Annals, Camille, Reine de Jour, Robert de Flandre, Thesé, Triton, Arsinée, &c., have blush or white flowers, with various colored eyes, some crimson, some violet, and others pink or rose. Rosetta is a fine large dark rose-colored flower, very showy; the beauty and variety which now exists in this hardy class of plants, through the exertions of the French and Belgian florists, render them the especial favorites of the garden.

NEW PORTULACAS.—The two new varieties of Portulacca,—the golden and the white,—are fine acquisitions; grouped with the scarlet and crimson, they make a brilliant contrast, and, in the noon-day sun, they literally present a sheet of "crimson and gold," so profusely do they bloom. With such additions to our annual plants, it will not be for the want of objects if our gardens are not radiant with brilliant colored flowers.

108. *IONOPSI'DIUM ACAU'LE Reich. STEMLESS IONOPSIDIUM.*
(*Brassicaceæ.*) Spain.

An annual plant; growing six inches high; with violet flowers; appearing in summer; increased by seeds and runners; or cultivated in any good soil. *Flore des Serres*, 1848, pl. 369.

A very pretty annual introduced from Lisbon, where it grows abundantly on the basaltic rocks in that vicinity. It is a fine plant for rock work for shady situations, "and merits the attention of all amateurs for its very small stature, its pretty heart-shaped foliage of an emerald green, and for its innumerable delicate violet-colored blossoms." It was introduced to England in 1845. It is a hardy annual, flourishing in any good, rather moist soil, and blooms from April to October. A desirable acquisition. (*Flore des Serres*, Sept.)

109. ECHI'TES PELTA'TA Velloz. PELTATE-LEAVED ECHITES.
(Apocynaceæ.) Brazil.

A hothouse climber; with yellow flowers; appearing in summer; increased by cuttings; cultivated in leaf-mould, heath soil and loam. *Flore des Serres*, 1848, p. 290.

A beautiful species of the handsome tribe of Echites, producing clusters of pale yellow flowers, which blooms abundantly all summer. It is similar in habit to the other species, and its flowers are large, pale yellow, and appear in clusters of four or five. It grows freely in a warm greenhouse or in the stove, and needs a good sized pot, in which it flowers freely (*Flore des Serres*, Sept.)

110. STIFFTIA CHRYSA'NTHA Mikan. GOLDEN-FLOWERED STIFFTIA.
(Asteraceæ.) Brazil.

A greenhouse plant; growing four feet high; with yellow flowers; appearing in spring; increased by cuttings; cultivated in leaf mould, loam, and sand. *Flore des Serres*, 1849, pl. 391.

A very showy shrub from Brazil, where it forms a small bush eight or ten feet high. It has a beautiful glossy foliage, and the branches are terminated with a single head of rich orange yellow flowers, each head being two inches long and composed of hermaphrodite and equal florets. Its culture is not difficult. It should be kept in a light and airy place, and in summer repotted and watered, and the shoots nipped off to make bushy plants, as it has a tendency to run up. It is a showy plant. (*Flore des Serres*, Sept.)

111. ALLOPLE'CTUS RE'PENS Hook. CREEPING ALLOPECTUS.
(Gesneraceæ.) California.

A greenhouse runner; growing two feet high; with yellow flowers; appearing in spring; increased by layers and cuttings; cultivated in leaf mould and peat. *Flore des Serres*, 1848, pl. 302.

A very interesting running plant, found on the mountain of St. Martha, a part of the Sierra Nevada range in California, by Mr. Purdie, collector for the Kew gardens. It grows generally at the base of trees or shrubs, and its stems twine around them for support. In spring the branches are covered with its beautiful yellow flowers, which are highly ornamental among the small foliage. M. Van Houtte states that it is a pretty plant for growing with orchidæ, as it runs over and often covers up the coarse appearance of the earth in which they grow. (*Flore des Serres*, Sept.)

112. HOYA IMPERIALIS Lindl. IMPERIAL-FLOWERED HOYA.
(Asclepiadaceæ.) Borneo.

A stove climber; growing six feet high; with violet colored flowers; appearing in summer; increased by cuttings, and grown in leaf mould, peat, and sand. *Flore des Serres*, 1848, pl. 393.

This new Hoya "is one of the most noble climbing plants" that has been introduced; among the Echites, Dipladenias, Bignonias, &c., there is nothing which will compare with this. It has a superb and ample foliage, and the flowers are produced in large umbels of from nine to fourteen each; they are of a brownish violet, and contrast prettily with the ivory white centre; they are borne on a long pendent stem, and exhale at night a very sweet odor; these, says the writer, are "*en gros* the qualities which signalize this magnificent asclepiadous plant." It was found in Borneo by Mr. Low, Jr., and introduced to the collection of Low & Co., of Clapton, who exhibited a plant in flower last season at the Regent's Park. It is a great acquisition, and we hope to see it ornamenting American collections. We ourselves paid three guineas for a small plant, but unfortunately it was too weak to reach us alive. It must be a splendid companion to the Stephanotus, whose foliage and habit it greatly resembles. Its culture and treatment is similar to the old wax plant, (*H. carnosa*), but it requires little more heat, and a larger trellis, as it is a more rapid grower. (*Flore des Serres*, Sept.)

ART. VI. Notes on Gardens and Nurseries.

It is some time since we have given our readers our usual notes on the gardens and nurseries in our immediate vicinity. As opportunity has afforded, we have laid before them accounts of our visits to gardens and nurseries in various parts of the country, somewhat, perhaps, to the neglect of the many flourishing places near at home. We will, however, endeavor to make up for this in future, by a very general as well as full account of all that is to be seen of interest in our neighborhood.

Linmere, Residence of R. S. Fay, Esq., May 28th.—One of the most beautiful sheets of water in Essex County, is

that known as the Lynn Mineral Spring Pond, in Lynn, situate about two miles from the village, between the Salem Turnpike and the old Danvers Road. Skirting the borders of this pond for a long distance, and extending over three or four hundred acres to the south and east, are situated the picturesque and varied grounds of Linmere, the residence of R. S. Fay, Esq. It is but two years since the proprietor took possession of the place, which was then, and had been for some time, in a much neglected state. Some attempt had been made to remove some of the rocks, clear off some of the wood, and reclaim some of the low lands, but these had been only half done, and added to the disordered appearance of the place. To put it all in good condition, and to make only the alterations necessary for an ordinary country residence, required no small amount of labor and expense, and a personal superintendence which some gentlemen would shrink from undertaking. But these and all ordinary obstacles to the improvement of the grounds, Mr. Fay took pleasure in removing, and he at once set about accomplishing his objects. Two years only have elapsed, but the changes seem as if they could only have been the result of years.

To reach the old Mineral Spring House, a private road was originally made from the turnpike to the old Salem road, but, in time, it had become much travelled; and as it passed immediately before the house, and between it and the water, the first object was to close it in order to give some seclusion to the place, as well as to plant and ornament the immediate view from the house towards the pond; to this end the land was graded, ploughed, and subsoiled, and a fine lot of Norway spruces and other evergreen trees planted, which, at this time, had grown so as to completely change the appearance of the place. On the east side a new flower and fruit garden had been formed on the site of the old one, and this was now filled with trees and plants. The second object was to make that part of the old road, from the turnpike, into an entrance avenue, and to remove a small farm-house, which stood near the main house, to the entrance gate, where it could be altered into a neat lodge; this being done the whole avenue was planted with trees of different kinds and at various distances, so as to form a picturesque belt. To the

right and left of the road, at short distances, the natural woods cover the ground, but scarcely a tree or shrub, the whole distance to the house, had been left standing. The sides of the avenue were cut away in some places and filled in in others, and now a handsome row of silver maples, oaks, elms, sycamores, &c., ornament it the whole length, and a few years' growth will line it with verdure. Many and various improvements have been carried out, and others are in contemplation, but we have not time to mention them. Our principal purpose now is to notice some of the plantations of trees, and particularly of evergreens, to which Mr. Fay has given especial attention. Every kind of pine, of which there is any hope of its proving hardy, has been imported from England or purchased at home, with a view to form a complete collection; and some new and rare sorts are not only growing here, which were set out this spring, but others, which have stood out the last severe winter, without the least injury.

The following is a list of some of the latter, with their height:—

Pinus Cémbra, 1 foot high.

Pinus excélsa, 2 feet. This is a splendid tree.

Picea Pinsdpo, 2 feet, fine.

Abies Smithiána, 2 feet. A most elegant tree.

Pinus sp. from the Columbia River, raised from seeds collected by the Exploring Expedition, 3 feet.

The Deodar cedars, of which there are several, were protected with pine boughs, but having only been planted six months they lost part of their tops.

A great number of new and rare shrubs have been planted, of which we shall give a list after they have stood out one or two winters.

The most important of Mr. Fay's labors has been the planting of about eighteen acres of his high lands with Scotch larches, upon which he set out upwards of twenty thousand, at an expense not exceeding *two dollars* per acre, besides the cost of the trees, which, of course, is not large, for they are only three years old. When we saw them they were looking well, but they have undoubtedly suffered by the late drought; at the time of our visit at least four out

of five were thriving. This is an experiment which will soon show how valuable the great quantity of apparently worthless land may become, when covered with a growth of larch and oak, which lies between Lynn and Salem, a great portion of which can be planted at as little outlay as that of Mr. Fay's. We shall at another time give some further account of these trees and the success attending the experiment.

Mr. Fay is now on a visit to Europe, where he will make himself acquainted with a greater part of all the hardy trees and shrubs, by an inspection of the principal places where arboretums have been planted; and on his return it will, we believe, be his intention to form a pinetum. He pointed out to us a piece of ground admirably adapted to the purpose, and he has not only ample means, but the good taste and judgment to carry it out.

Belmont Place, J. P. Cushing, Esq., July 25th.—Since our last account of this fine place many improvements have been made, one of the principal of which, as relates to the garden and house, is the removal of the brick wall which formerly separated it from the pleasure-ground. Not only has that been wholly removed, but a portion of the large Norway spruces, which had grown with such rapidity as to form a complete belt, have been taken out, leaving a sufficient number for all the purposes of a screen, and showing off those that remain to great advantage, their tall and stately stems, thickly studded with fine spreading branches, and densely clothed from the ground,—perfect pyramids, indeed, of verdure and beauty. How grand a tree is the Norway spruce! and what a feature it makes in the scenery of any pleasure ground or suburban villa. The Arbor Vitæ is admirably adapted for a hedge or screen, but as single trees its form is so clumpy that it cannot be introduced, where large quantities of evergreens are wanted, with such good effect as the Norway spruce.

The range of forcing houses has also undergone a change; the old sashes have been removed and their places supplied with an entire new set, made on a different plan from the others, and with regard, we presume, to strength: the glass is only about five inches in width and sixteen or eighteen inches in length. This admits of a large number of bars; and, as the

sashes are fourteen feet long, it prevents them from sagging, which greatly mars the beauty of a roof.

In the stoves, the vines have undergone a renovation; all of them were headed down last year, and a new shoot taken up from the bottom, which this year produced a very good crop. The cold houses, at the opposite extremity of the range, were producing a fine crop of fruit, all of which looked exceedingly well under the charge of Mr. Shimmin the gardener, and his foreman, Mr. Everts.

The large central conservatory was partly filled with fine specimens of achimenes, fuchsias, gloxinias, gesneras, &c., which were producing an abundance of flowers. In the framing-ground, in the rear of the houses, the plants were in the most vigorous condition. All but the camellias were plunged, and notwithstanding the dry summer they looked healthy and strong.

The two large peach-houses were producing a fine crop of peaches and nectarines upon the trellises, and the trees were well filled with good wood for another year. On the back wall of one of them, which is covered with pears, there were some very handsome specimens of the Winter Nelis, Brown Beurré, Passe Colmar, &c.

Notwithstanding the general destruction of the pear blossoms around Boston, Mr. Cushing's Wall and Espalier trees are well filled with good specimens. The Duchesse d'Angouleme, Winter Nelis, Beurré Diel, Glout Morceau, &c., very large and fine. The peaches were all destroyed by the winter except a Coolidge's Favorite, on a trellis on the east wall; this has a good crop.

The flower garden, as usual, was brilliant with showy flowers, notwithstanding the recent drought; the show of carnations and picotees had been fine, and the autumnal roses were just beginning to bloom. Another improvement we forgot to notice, is the gravelling of all the walks with the brown colored or Medford gravel. Formerly they were covered with the siftings of broken granite, and the light, almost white tint, was not only trying to the eyes, but not in good keeping with the grounds. No kind of gravel is so well adapted for garden walks, or harmonizes so well with the surrounding scenery, as this; and as it binds well and

treads hard, so that its surface may be easily swept, it has advantages over most other kinds. The mall and walks of Boston Common have all been covered with it at an expense of about fifteen hundred dollars. It is found in Somerville and Medford in considerable quantities.

Oakly Place, Mrs. W. Pratt.—When we were here last, in the fall of 1845, the new greenhouse had just been built and was scarcely completed. Now we found it well stocked with many of the showiest summer flowering plants, and the roof covered with vines, bearing a large and fine crop, though yet very young. The introduction of the new achimenes, gloxinias, fuchsias, and Japan lilies, enables our gardeners to make the greenhouse a place of interest in summer as well as in winter; and, when well managed, as attractive as any part of the grounds.

The whole premises were in fine order, under the care of Mr. McLennan, who is a thorough gardener. In the framing grounds there is a long range of melon pits, which was filled with healthy well grown plants of the Persian and other fine sorts, with an abundance of fruit, some of which was beginning to change color. Mr. McLennan grows his melons to great perfection, and we hope to be able to give some account of his system of cultivation.

The borders of the garden were gay with stocks, sweet peas, balsams, &c. *Bignonia radicans* grows finely here, and, trained up to a pole, is a perfect mass of foliage, enriched with immense clusters of its showy trumpet-shaped blossoms. In winter the shoots are loosened from the pillar, and laid upon the ground with scarcely any covering; and in this way it is never injured, no matter how severe the weather. *B. grandiflora* is managed in the same way.

Passing by some large bushes of the *Calycanthus* (sweet scented shrub,) we noticed that it was coming into bloom. As this somewhat surprised us, Mr. McLennan stated that he always got a second crop by pinching out the tops of the shoots in July, when laterals would be produced, and an abundance of flowers. He has followed this system for four or five years, and always with the same results.

Gooseberries succeed finely here with scarcely any trouble; they are not infested with mildew as in many places, which

shows conclusively that it is not the soil but the situation which causes it. Mr. McLennan covers the ground with short hay, which keeps the soil cool and moist. At Mr. Cushing's, only a quarter of a mile distant, but considerably lower, a principal part of the berries mildew. The crop of pears is light, but more abundant than in the gardens in the valleys on each side.

We cannot omit to give Mr. McLennan credit for the neatness and order of every part of the grounds.

Residence of Col. Wm. P. Winchester, Cambridge.—Col. Winchester's grounds are situated on the private road running from Mt. Auburn to Brighton, to the south of the cemetery, on the bank of Charles River,—a retired and pleasant locality. The house, which is a beautiful structure in the Italian style, by Gilman, is built of brick, and painted of a soft stone color. It is large, with two fronts, one facing the lawn to the west, and the other looking towards the river to the south, which, just at this spot, makes a sudden bend. It stands on a gentle eminence, which slopes away to the river side on the east, and is approached by a winding avenue of some length.

Every thing is new; the house has been completed the past spring, and all the planting, amounting to many hundred trees, has been done the present year; but Col. Winchester has been fortunate in securing the services of Mr. J. W. Brown, his gardener, who fully understands laying out and arranging the grounds, and already much has been accomplished. A dry and unfavorable summer has been severe upon the newly planted trees, which, at the time of our visit, were suffering for want of rain; but, notwithstanding these reverses, we found everything in better condition than we expected. In the rear of the house, and overlooked from the drawing-room, Mr. Brown has laid out a neat flower-garden in various shaped beds, corresponding with the form of the ground, with box edgings and gravelled walks; these beds were planted with balsams, verbenas, German asters, portulacas, roses, and other showy plants, and now presented a blaze of bloom. This garden is reached from the river front by a long flight of steps to the left, and forms a gay feature from the portico.

So new a place does not, of course, present a great deal of

interest, but, with Col. Winchester's ample means and good taste, and with a gardener so fully capable of carrying out his wishes as Mr. Brown, we have no doubt, at another time, we shall have a great many improvements to record, not the least of which will be the erection of a grapery, peachery, and conservatory.

Nursery of W. Kenrick, Nonantum Hill, Newton, August 8th.—The nursery of Mr. Kenrick comprises in all upwards of fifty acres, but only about twenty are occupied as a nursery. Part of the remainder is fine land, covered with a good growth of timber, and commands a fair price for building lots, the facilities of travel by railroad having made Newton Corner a favorite place for summer residences. The view from Mr. Kenrick's grounds is one of the most magnificent in the neighborhood. In the foreground lies the pretty village of Newton Corner, with Watertown beyond; Cambridge, with Charles River winding along its borders, and Boston with the harbor stretching away to the east; and to the west, in a clear day, the noble Wachuset may be seen towering its blue top above the finely undulated country which lies in that direction.

It is now more than fifty years since Mr. Kenrick's father established the nursery which has long borne his name, and which has been continued since his death by the two sons, William and John. It is twenty-six years since Mr. Kenrick established his nursery on the grounds of his father, sixteen acres of which he inherited at his death, the other portions having been added by purchases at various times. During this period Mr. Kenrick has disseminated a great number of trees, and among them many new kinds. It was through his exertions, accompanied with those of Mr. Manning and Gen. Dearborn, that Dr. Van Mons's fine pears were so early added to our collections; and two visits to England and France enabled him to procure many new fruits. Mr. Kenrick's pen was never idle. In addition to a large correspondence, he from time to time, for many years, contributed liberally to the old *New England Farmer*, and his articles, on various subjects, were instrumental in awakening public attention to the importance of horticultural pursuits. His *American Orchardist* was written at a time when it required

a great amount of labor to gather up the information. Horticultural magazines were then unknown here, and he had not the opportunity to copy page after page, without acknowledgment, as others have since done, but his work was the result of his own labors, aided by such veteran horticulturists as the late Hon. John Lowell, R. Manning, S. G. Perkins, Judge Buel, Gen. Dearborn, S. Downer, and others.

We have perhaps digressed ; but our apology must be our high appreciation of the labors of Mr. Kenrick, whose modest, unassuming, and somewhat retired habits, have made him but little known, except through his writings.

There are some fine specimens of trees and shrubs on Mr. Kenrick's grounds. The *Wistaria Consequenz* stands here without any protection, and never fails of an abundant bloom, and this, too, on the north side of the nursery ; thus conclusively showing that *cold* does not injure it, or other trees we shall name. The Osage Orange (*Maclura aurantiaca*) not only stands here in the same locality, but, last year, Mr. Kenrick exhibited some of the fruit produced on his trees. The elevation is probably between 200 and 300 feet above the sea. There is a very large and beautiful specimen of the common weeping ash, (*Fraxinus excelsior pendula*,) planted fifteen years, and twenty-five feet high, and thirty feet through the branches, reaching to the ground. A remarkable specimen of the Scotch pine or fir, (*Pinus sylvestris*,) eight years planted, about twelve feet high and of fine form, proving it to be one of the most ornamental species, and worthy a prominent place in every pleasure ground. A variegated leaved sycamore, twenty-five feet high, very handsome ; some large copper beeches, and a number of Norway spruces thirty feet high, and planted so as to show their noble character, throwing up their conical heads and clothed with verdure down to the very soil in which they grow ; this tree cannot be too highly praised as an ornamental evergreen, whether planted for the purposes of shade, shelter, or picturesque effect. Unless we except some trees at Mr. Cushing's, these are the finest Norway spruces around Boston.

Many other rare and fine trees we might name, of which single specimens, or more, have been set out, from time to time, around Mr. Kenrick's house, for ornamental effect, and

which have now arrived at full growth so as to develop their real beauty, but we have not the space at present. The grounds were in very good order.

Nursery of J. A. Kenrick.—Immediately adjoining is the nursery of Mr. Kenrick's brother, who occupies the home-
stead,—a fine old house, which has been built upwards of *one hundred and twenty years*, having an oak-timbered frame, and now firmer than many which have not been erected quarter of that period. Mr. Kenrick has eighty-five acres, seventy-five of which descended to him from his father, but not more than ten of them are occupied as a nursery. Much of the remainder is in orchard and tillage land. Mr. Kenrick has some fine specimens of magnolias, particularly one of the *M. macrophylla*, which usually flowers every year. There are also here some large and handsome specimens of hardy azaleas, laburnums, &c., but, as night was approaching, we had to defer a more particular account of things till a more favorable opportunity. Mr. Kenrick has a very good collection of trees and shrubs.

Winships' Nurseries, Brighton.—Since our last notice of this establishment, nine years ago, (Vol. IV. p. 414,) many improvements have been made in the grounds, and a considerable quantity of land added to their extent, the whole now comprising nearly forty acres, covered with a fine stock of all kinds of trees, but more particularly of the ornamental varieties. Since the death of Capt. Jonathan Winship, his place has been most ably filled by his son, Mr. Lyman Winship, who, in connection with Mr. Story, now superintend every department of the business.

That portion of the nurseries which has been more recently improved, lies to the north of the Worcester Railroad, which, it will be recollected, passes through the grounds. This land is admirably adapted to the growth of trees, being deep, mellow, and easily worked, and with a gentle slope so as to carry off all superfluous water,—an important thing in nursery grounds, where there are quantities of young stocks and trees, which are liable to be thrown out of ground by the freezings and thawings of winter. Messrs. Winships experienced the bad effects of this in the winter of 1835, when, owing to the embankments of the railroad, the water was

prevented from flowing off, and the result was the loss of a great quantity of stocks and young pear trees. No land that is not well drained is suitable for the purposes of a nursery.

Ten years have materially changed the features of the grounds, for, during this long period, two or three crops of trees have been taken from some parts, and probably but a very small portion of those growing in 1838 are now upon the premises. The great demand for large-sized trees has enabled the proprietors to dispose of the larger part of those on hand, and the scattering ones which remain, have been taken up and reset, and new plantations of young trees put out. By such management the grounds always present a neat and business-like appearance, and work can be done to much better advantage than when a few trees of large size are scattered over a square to prevent despatch in planting, and injure the young stock by a dense shade. We throw out these remarks that young nurserymen may see the ill effects resulting from allowing trees to remain too long on one spot of ground.

The most interesting things we noted, were the *arbor vitæ* hedges, of which there are three or four of great beauty,—one, in particular, enclosing the ground on the north side of Mr. Winship's house, which was upwards of seven feet high and three feet broad at the base, pruned in the form of an inverted V, and without a gap in the whole length, which is upwards of 100 feet. It has been planted five years. Nothing could be more beautiful than this, for the purpose of a screen to disagreeable objects, or for shutting out one part of the garden from the other, as it is one mass of verdure the year round. But little care is needed to keep it in order. Two clippings, one in June and the other in August, are all that are required to keep it in shape. The trees are now to be procured at reasonable rates, and we know of nothing so well adapted for this purpose as the *arbor vitæ*.

The drought had been so severe that but few shrubs were now in bloom; the finest thing we saw, was a *Clématis flâm-mula*, one sheet of snowy blossoms. Why is not this, as well as the other sorts of clematis, oftener seen in our gardens? a question we should be pleased to have answered.

Can any thing be more beautiful than this species; it is nearly or quite hardy, only requiring to be loosened from the trellis and laid upon the ground, where it keeps without the least injury. This and the *Wistaria Consequana* should be planted in every garden, and we hope to see them both as common as the lilac.

The stock of maples, ashes, elms, sycamores, &c., is large, the trees thrifty and well grown. A great quantity of young stocks of fruit trees were planted the past spring, and were now, some of them, being budded. Arbor vitæ, white pines, and hemlocks, in good quantity, especially of the former, and the collection of various ornamental shrubs excellent.

The grounds were in the very best order, and it was a gratification to see such neatness and cleanliness in every part. A nursery should no more be overgrown with weeds than a gentleman's flower garden.

Garden of O. Johnson, Esq., Lynn, August 9th.—We could scarcely believe, until we had referred to our Magazine, that a period of six years had elapsed since our last visit to Mr. Johnson's garden. The trees had now grown to a good size, and the hedge, which had then just been planted, now presented a formidable barrier between what were at that time termed the old garden and the new, yet it did not seem that six years had slipped away.

Mr. Johnson is as devoted to the pursuits of horticulture as in years past. The same neatness, order, and good keeping of the grounds were every where apparent, and it was a source of great gratification to find it not only kept up to the "economic point," according to the late Mr. Loudon's standard, but something beyond it. Not a weed was to be seen in any part.

Mr. Johnson's espalier trees are models for imitation, and their management reflects much credit upon his skill. A *Duchesse d'Angouleme* was covered with superb fruit, even in this scarce season; but it is somewhat remarkable, that while some cultivators complain of the *Duchesse* as a shy bearer, and wanting in flavor, it never has failed to produce a fine crop, here, of delicious fruit. The standard, as well as pyramidal, pear trees, were bearing a much larger quantity of fruit than those in the immediate vicinity of

Boston, thus showing that the winter did not affect all localities alike. In Salem there is scarcely any pears; even Mr. Manning's great collection of trees is almost barren of fruit.

The *quenouille* trees, which we mentioned in our last notice of this place, (Vol. IX, p. 423,) and which had then just been planted, were now many of them full of fruit; they are exceedingly well managed, and though Mr. Johnson does not tie down the branches to the extent that is usual in this style, by the French gardeners, yet they are sufficiently so to have a good effect, and to have the desired object of bringing the trees earlier into bearing. The branches are fastened down by exceedingly fine wires, which have one end made fast to a peg in the soil, and at a short distance they are scarcely perceptible. Louise Bonne of Jersey and others, were producing a good crop. The Rostiezer, Mr. Johnson considers not inferior to the Seckel, and we fully agree with him, that it is one of the most delicious of all pears.

Mr. Johnson pointed out to us the beds of our seedling strawberry, from which he gathered *seven hundred* quarts of fine fruit the present summer. They occupy, in all, less than *seven* thousand feet of land, in four separate beds, with a few Virginias intermixed as fertilizers; this shows the produce to be about *four thousand five hundred* quarts to the acre; taking the quantity of ground, a crop, we venture to state, never exceeded, if equalled, in this vicinity, or, we think we may safely say, in any part of the country.

The Buckthorn hedge, which separates the front from the back garden has been well managed. It was planted in 1841, and was now eight feet high, three feet through at the base, and trimmed in the form of an inverted V. No better specimen could be desired, and an inspection of it will fully convince any one that it is the best plant we yet have for a hedge. Two shearings a year keep it in perfect order.

The blackberry, as well as the raspberry, is cultivated in great perfection here, the principal stock of the latter being the Franconia, which Mr. Johnson likes on account of its bearing-carriage so well. The blackberries were just now beginning to bear, but we are inclined to think they will soon become indispensable additions to every garden. The rich

and noble appearance of its large berries are always admired. Our cultivators who have leisure should give their attention to the production of seedlings, with the hope of securing some greatly improved varieties.

The vinery, of which we gave a diary some time ago, (VIII, p. 201,) was now bearing a heavy and fine crop of fruit, principally Zinfindal, Black Hamburgh, White Frontignan, and Muscat of Alexandria; those in the cold division of the house were coming on well. The early ones had mostly been cut, with the exception of the Muscats. Six years do not seem to have impaired the health or vigor of the vines in the least. They are pruned on the spur system, and Mr. Johnson's efforts are to procure medium-sized bunches of perfectly colored and well-ripened fruit, in preference to large clusters of half-colored and inferior-flavored grapes.

The flower garden, as usual, was gay with phloxes, verbenas, &c., though these flowers were not displayed in the profusion of ordinary seasons, in consequence of the severe and long-continued drought. The garden engine had been freely used, but, with the scorching sun, all the appliances of this kind did but little to overcome the parching dryness of the earth. Our visit afforded us a great deal of pleasure.

Residence of E. R. Mudge, Esq.—The beautiful grounds of Mr. Mudge are situated near Lynn Beach, and comprise an extent of about one hundred and forty acres, a larger part of which are woodland. The house is a fine granite building, in the rural Gothic style, and stands on a gentle eminence, the land sloping off in either direction, with a lawn of three or four acres in front, and the flower and fruit-garden, which occupy an acre or more, of a parallelogram shape, to the left, and only separated by a Buckthorn hedge. The approach is by a curved avenue, leading to the rear of the garden, to a large open area between that and the house. Our time was limited, and we only had an opportunity to take a hasty walk over the premises, but we trust we may have the pleasure of visiting Mr. Mudge's place again, when we are sure we could find much to note down of interest. The improvements in contemplation will materially add to the beauty of the grounds, and, with Mr. Mudge's

means, we do not doubt that his residence will be one of the finest in the neighborhood.

The lawn has been exceedingly well managed, and presented a soft and even surface, notwithstanding the recent dry weather. This may be easily accomplished by frequent mowing and rolling, by which means alone a lawn can be kept in good condition. Unless it is intended to give the after-care necessary to have a good lawn, it is only time and expense thrown away to make the attempt in the beginning; and, with proper attention, we are certain that a soft and verdant lawn may be obtained in our climate, if not to the same perfection as in England, at least in sufficient beauty to be one of the most attractive features of a villa residence.

Very few trees have yet been planted, but Mr. Mudge has a nursery of young trees, and intends to add many more, with a view to plant largely another year. The Buckthorn hedges were thick, dense, and good. A small grapery, about fifty feet long, occupies the back part of the garden; in front are beds of flowers and shrubs on turf, and near the house a fine lot of dwarf pears on the quince. In the rear of the grapery is the kitchen garden.

We alluded to the order and neatness of Mr. Johnson's garden; and it will not at all detract from the merit of his place to say, that, in this respect, his neighbor, Mr. Mudge, is a formidable rival. Lynn must be awarded the palm for the high keeping of her gardens.

Residence of F. Tudor, Esq., Nahant.—Nahant is a bold promontory, jutting out into the sea, and only reached by a narrow beach of three or four miles in length. Here, during the summer season, the citizens of Boston resort to enjoy the refreshing breezes, which, cooled by the sea on all sides, give it the air of the autumn season. With the exception of a few rows of cotton-wood, (*Pópulus canadénsis*) a stranger sees scarcely any thing in the shape of a tree or shrub, and if his visit should be in July or August, he would wonder why they have not been more abundantly planted around the few cottages which are scattered over the place. At this season, the waves gently lave the rugged rocks, and the Eastern breezes waft nought but freshness and vigor; one would think Nahant might be as easily converted into a

garden as similar waste of country a hundred miles inland. But change the time: look at Nahant in spring or autumn. The dashing waves fiercely lash the bold promontory, and throw high their spray over tree and shrub: the wind sweeps with maddening force, divesting trees of their foliage, twisting off their branches and uprooting their trunks; then it only seems remarkable that any thing like vegetation can live on such an exposed and bleak a place.

It is said that formerly, many years ago, all the islands in Boston harbor were covered with forest trees, and that they were cut by the neighboring people for fuel and lumber. If this is true, there can be no doubt that they may again be so covered, and the project only needs to be set about in earnest, and in the right way, to restore them to their original verdure and beauty. That this will be done at Nahant there is good reason to believe, for Mr. Tudor has begun the work, and shown that there is no obstacle to its being accomplished. What he has done others may do. Visionary as some have considered his labors, he has demonstrated this, and the proprietors of these seaside residences must feel indebted to him for the avenue of trees which now adds so much to the beauty of the place.

Mr. Tudor was one of the earliest proprietors here; his cottage was built twenty-five years ago, in an exposed location, and without a tree of any kind near it. With a great love of gardening, Mr. Tudor at once saw how great a field he had for improvement: this he intended to make his summer resort; but, without a garden, without trees, that would not do. Art must do something to overcome the disadvantages of such a bleak spot; and to Mr. Tudor's ingenious mind the very obstacles to be overcome suggested the means.

The great difficulty was to break the force of the winds. Thick belts of trees would do this, provided they would succeed; but, as too much time would be lost in the trial, recourse was had to more immediate means of effecting this object. A high board fence would answer, but that would be very expensive and constantly liable to injury from high winds, which, striking against it with immense force, would perhaps prostrate it at once. The plan decided upon, was to erect high and substantial palings all around the garden,

against which the wind could strike and expend its force, and do no danger to the enclosure. To this end preparations were made, and, twelve or fourteen years ago, about three and a half acres were enclosed in this way. The paling has received no injury, and has required no repairs up to the present time. This area now forms Mr. Tudor's garden; and for vigor of growth and abundance of product, few trees in the most favorable situations around Boston surpass them.

The palings are about eighteen feet high, and are made of boards sawed to the thickness of an inch and a half, and placed about one inch apart. The main posts are cedar, with others as braces on the inside, standing about two feet from the base. The palings are nailed to horizontal strips of board, about eight inches wide and three feet apart. Inside of this, at the distance of about six feet, is another paling, built in the same way, but only sixteen feet high, and, on two sides, the east and west, there is a third paling or trellis like the others, but still lower: both of the inner ones are used as trellises, upon which pear and other trees are trained. These double and treble palings, it will be seen at once, completely break the force of the winds, so injurious to tender shoots and leaves, and act as a barrier against the salt spray, which is alike destructive to vegetation.

We shall not attempt to enumerate all the improvements here, but, before we allude to the rapid growth of the trees and their fruitfulness, we must not omit to state that Mr. Tudor did what but few do, but which should never be left undone,—that is, he trenched the whole garden nearly three feet deep, bringing the gravelly subsoil to the surface, where it could be enriched and made fertile. It was then laid out and planted with fruit trees of various kinds, some of which, particularly the apples, are of very large size. In common with the neighborhood of Boston, Nahant suffered from the severity of the winter, yet we noticed Mr. Tudor had more fruit than many gardens where there are many more trees. A Chumontelle, trained to a trellis, was bearing a fine crop of handsome fruit, and a pyramidal tree of the Louis Bonne of Jersey was literally loaded. All the pears were in fine condition. Mr. Tudor has a seedling variety, which promises

well; it was planted eight years ago, and is supposed to be a cross between the White Doyenné and the Seckel.

To show what can be done in the way of removing large trees, Mr. Tudor pointed out to us an apple tree removed from Cambridge in 1843; it was then *twenty-seven inches in circumference*; now it is full of fruit, and measures *thirty-eight inches round*! Espalier pear trees, of very large size, were bought of the late S. G. Perkins, seven or eight years ago, and have grown vigorously, and borne fruit annually. Among the new pears, we noticed Doyenné Goubault in bearing; also, St. Michael Archangel, which is quite distinct from the old St. Michael, though the latter is often received from France for that variety.

Mr. Tudor is trying a series of experiments to ascertain, if possible, the cause of the cracking of the St. Michael or White Doyenné, and some other pears. He thinks our hot sun is a principal cause of it, and, to test this, he has had a paling erected sufficiently high to shade the tree; but, as the fruit buds were destroyed, the experiment will have to be continued another year. If, after a fair trial, the sun is not found to produce cracking, other experiments will be made, to ascertain, if possible, how this delicious pear can be brought back to its former excellence, in all soils and situations. With Mr. Tudor's enthusiasm, pomologists may be assured, that no pains nor expense will be spared to accomplish his views.

The cherry succeeds admirably in Mr. Tudor's garden, trained as espaliers; some of the trees cover four or five hundred square feet, and produce abundantly. The peach, Mr. Tudor has not found to succeed well; the precarious time for the crop is in June, when, from some cause, the fruit all drops from the trees. We never saw finer currants than were growing here; the bushes loaded with fruit. Mr. Tudor has tried the mode of catching insects in broad-mouthed bottles, which we gave an account of, four years ago, (Vol. XII, p. 467;) by *counting* the insects in *one* bottle, and making an estimate of the whole number suspended from the trees, the enormous quantity of *one hundred and ten thousand* were caught in *thirty-six* hours.

Mr. Tudor's grounds are not only in themselves worthy of

inspection by all cultivators, but they teach an important lesson to all who are interested in horticultural improvement. They demonstrate that beautiful gardens and fruitful orchards may be enjoyed in the bleakest situations, in the immediate vicinity of the seashore; and, as New England possesses so great an extent of seacoast, abounding in places desirable, from the salubrity of the locality, for summer residences, Mr. Tudor's example will be well worthy of imitation; and though all may not possess the means of accomplishing as much, there are others who will be ready to avail themselves of his plan, without regard to cost, gratified to know how much they may enjoy, and acknowledging their indebtedness to the indefatigable exertions of Mr. Tudor, in his triumph of art over nature.

MISCELLANEOUS INTELLIGENCE.

ART. I. *General Notices.*

Injurious effect of excessive quantity of Fruit.—Writers on rural economy, in order to adapt their style to the intelligence of their readers, distinguish fruit trees from forest trees. But, strictly speaking, this division is not correct. All trees, as well as herbaceous plants, have their fruit, as indeed the whole of the vegetable kingdom, not even excluding Cryptogamous plants, if we may trust to the most learned botanists. These fruits are frequently what we usually call *seeds*. What we are more especially accustomed to call fruit, is generally only the substance which forms the outer covering, sometimes leathery in appearance, as the shell of the walnut, or fleshy, like that of the peach or the apple. This preliminary observation was necessary in order to explain that an excessive production of fruit may happen to any plant brought into a state of peculiar vigor, either by the nature of the nutriment given it, or by that of the locality in which it is placed, or by the extraordinary character of the season. This, however, is more especially apparent to the agriculturist in the case of the trees more commonly styled fruit trees. We see frequent examples of it in the apple and pear. Now, it is certain that this superabundance is the cause of the fruit being inferior in quality; and often their external conformation is not good. An apple tree overloaded with fruit has them generally of a very small size.

Cultivators usually care little if the seeds of a large number of plants are well formed or not. As far as concerns them, all they look for is, that the fruit should be externally well formed, and that their flavor should be as

rich as possible. Yet it is necessary that they should prevent the evil consequences to the tree of too great a production of these fruits. It is well known that the apple and pear give a crop of fruit only in alternate years, remaining much debilitated after having fruited. This appears to me to be owing to a defect in the distribution of the sap; being all drawn towards the nutriment of the fruit, it cannot ensure the robust formation of the buds, the hope of the following year. But even worse evils are to be feared. Gerbezio gives the history of an apple tree which, after having produced one autumn an extraordinary quantity of apples, became, in the following month of March, almost stripped of its bark, which detached itself from the wood, commencing at the bottom of the trunk and continuing upwards along the branches, and in a short time the tree perished. Last year I observed something of the same kind in an apple tree, which the farmer assured me had required the support of eight poles to prevent the branches being broken down by the weight of the fruit. It was old, and to its age was attributed the disease in question; but, in my own mind, I was more disposed to ascribe it to the over production of fruit. Peaches, plums, apricots, pears, and almost all fruit trees, are liable to this disease, which it is very necessary to prevent, more especially where the tree is valuable from the quality of the fruit. This is done by depriving it of some of the fruit. The practice becomes necessary at all times when the tree is weak, for the purpose of ensuring the due formation of the new branches, as above stated.

Much caution must be used in this process of thinning; too much haste in the operation must be avoided, as winds and insects cause a great number to fall, thus naturally assisting the tree. We must be careful not to tear off the fruits we thin out, but cut them off with a sharp instrument. The best rule to follow is, to choose the time when the fruit has attained about one half of its size, and then to cut out one wherever three or four grow together. Some amateurs complain that some of the finer kind of grapes, which they cultivate on trellises, and reserve for the table at a later season, do not ripen well, on account of the grapes being too close in the bunch. The remedy is easy: you have only with a pair of scissors to cut out a portion of each bunch, taking it from the part next the trellis and near the stalk, not from the extremity of the bunch, as is sometimes recommended.

I cannot pass over silently a circumstance in the cultivation of the vine which I have often observed. When the crop has been scanty one year, the vine is allowed the next year to overload itself with fruit, in order to have a good vintage; but the grapes are then not of the best quality, and the plant usually suffers considerably from weakness. The evil is then owing to the inexperience and avidity of the cultivator. In the case of tall trees, the above-mentioned methods are not practicable. In their case all that can be done is to counteract the weakness following the over-production of fruit, by working and manuring the roots, not immediately round the trunk, according to the ordinary practice, but over the ultimate fibres of the roots, which are those which suck up the juices. As the roots gener-

ally occupy pretty nearly the space of ground which is covered by the branches, that will readily indicate where the manure is to be applied. Herbaceous plants, overloaded with flowers, require attention to a process important for the insuring the good quality of the seeds which it is wished to gather. I proved it through a long series of years; and, moreover, it is the constant practice of gardeners, with the most beneficial results. Let the main shoot of the plant be stopped, and the lateral branches alone preserved. Even these, when too numerous, should be thinned out. The best established principles of vegetable physiology are in favor of this practice. The sap is always more elaborated in the horizontal branches, and that which, if left at liberty, would go to form the upright shoot, is forced into the lateral branches, is then more elaborated, and adds vigor to the seeds which are formed — (*Gard. Chron.*, 1849, p. 389.)

Fuchsia serratifolia.—This fuchsia has succeeded admirably with me under the following treatment:—In January I plunged my old plant in the stove, which is heated on the tank system; it soon made three shoots. I allowed it to remain there till the shoots were about one foot in length. The plant was then repotted, and placed in a warm greenhouse, where it grew very strongly; it reached the height of about 2½ feet without showing the least inclination to flower. At this stage water was given it, but sparingly, for a few days, when the leaves turned yellow and most of them fell off. It was kept quite dry for about a week, which partly ripened the wood; it was planted in the flower border about the 20th of May, when it soon sent out 50 lateral branches, 43 of which are producing fine clusters of blooms. I have no doubt that fine specimens may be grown in this way, and by leaving only one shoot to take the lead instead of three.—(*Gard. Chron.*, 1849, p. 486.)

Rhubarb Preserve.—Rheum australe or R. Emodi is the proper kind. It makes a most deliciously flavored preserve, nearly if not quite equal to that of the Winesour Plum. It may also be made so as to nearly resemble tamarinds, being a very fine acid. This rhubarb was many years since distributed to the fellows of the Horticultural Society from Nepaul, but owing to its lateness and great acidity, it was generally soon rooted out, and is now seldom seen in gardens. It is however well worthy of a place in all, merely for preserving. A hybrid between it and the common rhubarb is also very deliciously acid, and now just coming into perfection.—(*Gard. Chron.*, 1849, p. 390.)

ART. II. Domestic Notices.

Exhibitions of Horticultural and Agricultural Societies.—The annual exhibitions of several of these societies will be held as follows:—

Massachusetts Horticultural Society, Tuesday, Wednesday, Thursday, and Friday, the 17th, 18th, 19th, 20th, September.

Norfolk Agricultural Society, Dedham, Mass., 26th September.

Worcester County Horticultural Society, at Worcester, commencing September 20th.

The New York State Agricultural Society, at Syracuse, September 10th, 11th, and 12th, and the Pomological Convention on the 14th.

Pennsylvania Horticultural Society, Philadelphia, Wednesday, Thursday, and Friday, 12th, 13th, and 14th, September.

New Haven Horticultural Society, at New Haven, September 26th, 27th, and 28th.

Albany and Renaselaer Society, at Albany, Wednesday and Thursday, the 19th and 20th September.

American Institute, New York, commencing Tuesday, October 2d, and the Fruit Growers' Convention on the same day.

Maryland State Agricultural Society at Baltimore, 10th, 11th, and 12th, October.

Horticultural Exhibition of the American Institute, New York.—The 22d annual fair of the institute will be held at Castle Garden, New York, on the 2d of October next. The premiums, as usual, are very liberal, and so numerous that we have not room to give the entire list. The principal ones are as follows :—

FLOWERS.

To be renewed during the Fair.

For the largest display of dahlias,	Silver cup, \$ 10 00
For the second do.,	Silver cup, 8 00
For the third do.,	Silver medal.
For the fourth do.,	Boudoir Botany.
For the fifth do.,	Hovey's Magazine of Horticulture.
For the sixth do.,	Parson's Rose Manual.
For the next largest display,	Mrs. Loudon's Ladies' Flower Garden.
For any further display,	Bridgeman's Gardener's Assistant.
For the best ornamental design of cut flowers,	Silver medal.
For the second best do.,	The American Flora.
For the third best do.,	Hovey's Magazine of Horticulture.
For the next best do.,	Mrs. Loudon's Ladies' Flower Garden.
For the best and greatest variety of roses and cut flowers,	Horticulturist.
For the second best do.,	American Flora.
For the third best do.,	Parson's Rose Manual.
For the next best do.,	Prince's Manual of Roses.
For the finest display of bouquets,	Silver medal.
For the second best do.,	Downing's Cottage Residences.
For the third best do.,	Lang's Highland Cottages.
For the best and most beautiful bouquet,	Hovey's Mag. of Horticulture.
For the second best do.,	The American Flora.
For the third best do.,	American Flower Garden Directory.
For the next best do.,	Prince's Manual of Roses.

The following premiums are offered for roses and dahlias, to be exhibited on Monday, October 9th, at 12 o'clock :—

- For the best 20 varieties of roses, (named,) . . . Silver medal.
 For the second best do., . . . Browne's Trees of America.
 For the next best do., . . . Parson's Rose Manual.
 For the best 24 varieties of named dahlias, . . . Silver medal.
 For the second best do., . . . Browne's Trees of America.
 For the next best do., . . . Downing's Landscape Gardening.
 For the best 12 blooms of seedling dahlias, . . . Silver medal.
 For the second best 12 blooms of do., . . . The American Flora.

FRUITS.

- For the choicest and greatest variety of fruit, . . . Silver cup, \$ 10 00
APPLES.—For the greatest number of choice varieties, Silver cup, 8 00
 For the second best assortment, 6 numbers of Hovey's Fruits of America.
 For the third best do., . . . Horticulturist.
 For the next best do., . . . Bridgeman's Gardener's Assistant.
 For the best variety of table apples, not less than twelve,
 Transactions of the New York State Agricultural Society.
 For the best variety of winter apples, not less than twelve,
 Transactions of the American Institute.

CRANBERRIES.—For the best cultivated cranberries,
 Transactions of the New York State Agricultural Society.

- For the second best do., . . . Transactions of the American Institute.
GRAPES.—For the best native grapes, . . . Silver medal.
 For the second best do., . . . 4 numbers of Hovey's Fruits of America.
 For the third best do., . . . Downing's Fruit Trees of America.
 For the next best do., . . . Hoare's Treatise on the Vine.
 For the best foreign grapes, . . . Silver medal.
 For the second best do., . . . 4 numbers of Hovey's Fruits of America.
 For the third best do., . . . Bridgeman's Gardener's Assistant.
 For the next best do., . . . Hoare's Treatise on the Vine.
PEACHES.—For the best and greatest variety, Hovey's Mag. of Horticul.
 For the best freestone peaches, not less than twelve,
 Downing's Fruit Trees of America.
 For the best clingstone peaches, not less than twelve,
 Bridgeman's Gardener's Assistant.

NECTARINES.—For the best nectarines, not less than twelve,
 Transactions of the American Institute.

- PEARS.**—For the greatest number of choice varieties, Silver cup, \$ 8 00
 For the second do., . . . 6 numbers of Hovey's Fruits of America.

A complete programme of the whole arrangements of the exhibitions and lists of prizes, may be had on application to J. W. Chambers, secretary of the Institute.—*Ed.*

National Convention of Fruit Growers.—The second session of the American Congress of Fruit Growers, will be held at Castle Garden, in the city of New York, on Tuesday, the second day of October next, at 10 o'clock, A. M.

As it was at the last session resolved, that all pomological, horticultural, and agricultural associations of North America, be invited to send dele-

gates to this Congress, the undersigned respectfully urge upon all such societies, the immediate appointment of delegations composed of the most experienced fruit growers and pomologists, as it is intended to make the coming assemblage the most interesting on this subject ever held in this country.

The undersigned also respectfully invite all pomologists, fruit growers, orchardists, and nurserymen, and all others interested in the subject, to attend the coming session.

Among the objects of this congress are the following:—

To endeavor to ascertain, by comparison of fruits, the relative value of varieties in different parts of the country.

To ascertain from the reports of the State fruit committees which are the best varieties for local cultivation, which are adapted to general cultivation, and which are always worthless. To compare opinions respecting the value of new varieties; to discuss the diseases of fruit-trees; the best manure and methods of cultivation; unsettled points in pomology, and to elicit and disseminate information, and maintain a cordial spirit of intercourse among horticulturists.

Essays and papers may be expected from distinguished scientific and practical cultivators on various interesting topics in pomology and horticulture.

In order to increase as much as possible the interest of the convention, the delegates are requested to bring with them (carefully packed and a label pasted on the fruit, or the name written directly on each specimen, so as to present them in good order,) specimens of all fruits grown in their vicinity that may be worthy of notice, together with a small branch and leaves, if possible, of every new variety.

Every contributor is earnestly requested to make a list of his specimens, and present the same with his fruits, in order that a report of all the varieties entered, may be submitted to the convention as soon as possible after its organization.

The convention will hold its meetings in the new saloon, Castle Garden, kindly provided by the American Institute for its accommodation.—MARSHALL P. WILDER, *President*; S. B. PARSONS, P. BARRY, GEO. B. DEACON, *Secretaries*.—August 1, 1849.

Belle de Bruxelles (or Belle d'Aout) Pear.—Mr. Editor: I notice in the last number of your Magazine, a communication from Mr. Earle, President of the Worcester Horticultural Society, in which he intimates that the Belle de Bruxelles pear of my collection, and also of Mr. Manning's, is not the same variety as the one disseminated by Messrs. Ellwanger & Barry of Rochester, N. Y. I may have unwittingly dispensed scions or trees, which are not true, for "mistakes will happen" in pomology as well as in other things, but the kind known by me for ten years past, under this name, is identical with the sort sent out by Messrs. E. & B., and of whom I have received both trees and fruit. I know Mr. Earle's desire for accuracy in these matters, and have therefore, to prevent further confusion in the nomenclature of fruits, sent him specimens from my trees. The variety gen-

erally imported from the French nurseries as *Belle de Bruzelles* is *Belle et Bonne*, of Thompson.

There is a handsome colored engraving of the pear in question, in Noiset's *Jardin Fruitier*, but I have received it under its only proper name from one nursery, namely, at Orleans, from whence my original trees were imported. It now comes to us, both from France and England, under the name of *Belle d'Aout*.—*Yours, &c., Marshall P. Wilder, Boston, August 18, 1849.*

ART. III. *Albany and Rensselaer Horticultural Society.*

Third Exhibition for 1849.—The exhibition of the society, held at the hall of the State Agricultural Society, on the 25th inst., was a most successful one, especially in fruits and vegetables. Owing to the extreme drought, the show of flowers was not as extensive as at some former exhibitions, the show of gooseberries was more extensive in variety, and the fruit finer in quality than any we have seen, and of cherries and currants, it was unusually fine. The society has reason to be encouraged from the spirit which is displayed in every department.

FRUITS: The committee on fruit reported that there was exhibited by Henry Vail, Esq., Troy, six varieties of cherries, viz., Black Heart, Black Tartarian, Black Eagle, Early White Heart, Late Duke, and a very beautiful bright red colored seedling of the Morello family, resembling the carnation,—this seedling was raised by Mr. Vail; seventeen varieties of gooseberries, (of very large size, and entirely free from mildew, this is attributed to the application of thick layers of salt meadow hay under the bushes;) five varieties of currants, viz., Red Dutch, Champagne, Cherry Currant, White Dutch, and English Black; and five varieties of raspberries. By B. B. Kirtland, Greenbush, four varieties of cherries, viz., Black Heart, Grafton or Yellow Spanish, Kentish, and a seedling resembling Transparent Guigne; three varieties of gooseberries; also, Madeleine pears, fully ripe. By A. J. Parker, Sweet Montmorency cherries and four varieties of gooseberries.

By Dr. Herman Wendell, nine varieties of cherries, viz., Holland Bigarreau, Yellow Spanish or Grafton, Elkhorn, Wendell's Mottled Bigarreau, Black Tartarian, White Bigarreau, May Duke, Black Morello, and Transparent Guigne; seven varieties of currants, viz., Knight's Sweet, White Grape, Cherry Currant, Black Naples, Red Dutch, Champagne, and White Dutch; and five varieties of gooseberries. By E. P. Prentice, of Mount Hope, six varieties of cherries, viz., Black Tartarian, Late Duke, Downer's Morello, Black Mazzard, and Black Heart; three varieties of currants, viz., English Black, Red Dutch and White Dutch; also, fine Yellow Harvest Apples, fully ripe. By E. E. Platt, White Bigarreau, Grafton or Yellow Spanish, Holland Bigarreau, and eleven varieties of seedling cherries, several of which were of very fair character, much resembling

their parent, the White Bigarreau, and one of which,—too unripe to enable the committee to judge of its character,—promising to be of large size and fine appearance. By Ely Young, ripe and beautiful Peach Apricots. By Mrs. Weed, of Washington Street, very fine Woodward Whitesmith gooseberries. By James Wilson, of Albany, forty-one varieties of gooseberries; eleven varieties of currants, viz., Knight's Sweet Red, White Grape, Red Grape, Cherry Currant, Red Dutch, Longbranch, Victoria, Knight's Late, White Dutch, and Naples Black; also Imperial Morello, and Late Duke cherries. By V. P. Douw, of Wolvenhook, Red and White Antwerp Raspberries, Stoddart's Red Alpine strawberries; five varieties of gooseberries; and also Black Morello cherries. By William Newcomb, of Pitts-town, Whitesmith gooseberries, very fine; also, English and Missouri Black Currants. By John S. Gould, Red Alpine strawberries, and Green Amber gooseberries. By Warner Daniels, Woodward's Whitesmith gooseberries, and a seedling variety resembling it.

PREMIUMS.—The following premiums were awarded :—

CHERRIES.—For the best and most extensive collection, to Dr. Herman Wendell, \$3.

For the second best, and second most extensive collection, divided between Henry Vail, Troy, and E. P. Prentice, Bethlehem, each \$1.

For the best three varieties, to Dr. H. Wendell, for Elkhorn, Yellow Spanish or Grafton and Wendell's Mottled Bigarreau, \$2.

For the best one variety, to Dr. H. Wendell, for Wendell's Mottled Bigarreau, \$1.

GOOSEBERRIES.—For the most extensive collection, to James Wilson, of Albany, \$3.

For the best collection, to Henry Vail, Troy, \$3.

For the best and finest flavored variety, to Henry Vail, for Compton's Sheba Queen, \$2.

* For the second best variety, to Henry Vail, for Lady of the Manor, \$1.

CURRANTS.—For the best and most extensive collection, to James Wilson, of Albany, \$3.

For the best and finest flavored variety, to James Wilson, for Knight's Sweet Red, \$2.

For the second best variety, to Henry Vail, for White Dutch, \$1.

RASPBERRIES.—For the best and most extensive collection, to Henry Vail, of Troy, \$3.

For the best and finest flavored variety, to Henry Vail, for Fastolf, \$2.

For the second best variety, to Henry Vail, for Franconia, \$1.

And special premiums of one dollar each, to Ely Young for Peach Apricots, to B. B. Kirtland for Citron des Carmes pears, and to Ezra P. Prentice, for Yellow Harvest apples.—SANFORD HOWARD, *Chairman*.

GREENHOUSE PLANTS AND FLORAL DESIGNS.—The committee report that there was exhibited, by J. Wilson, the following varieties of plants growing in pots, to which the premium of three dollars was awarded, viz., *Torënia asiatica*, *Gloxinia speciosa*, *Achimenes picta*; and *Fuchsias*, *Zanobia*, *Conspicua*, *Lady Millbank*, and *Arborea*. Also, by Mr. Wilson, a

beautifully arranged round bouquet for centre table vase, composed of choice roses, spireas, dahlias, pelargoniums, &c., &c., to which the premium of two dollars was awarded. A flat bouquet for mantle vase, composed of choice flowers tastefully arranged. A flat bouquet for the hand—to which the premium of one dollar was awarded,—most exquisitely arranged with abutilons, hoyas, carnations, *Stephanotus floribundus*, and other rare flowers, and a round bouquet for the hand, equally well arranged, and also composed of rare exotics, to which the premium of one dollar was awarded. By Joel Rathbone, a large round bouquet for centre table vase, composed of fuchsias, roses, pelargoniums, gloxinias, hoyas, &c., &c., arranged with much taste and skill. By Dr. Herman Wendell, two basket bouquets, with handles,—one round and one oval,—composed of carnations, pansies, *Stephanotus*, roses, &c., &c., arranged with fine taste and much skill, to one of which the premium of one dollar was awarded. By John S. Gould, a small basket bouquet, composed wholly of choice pinks, most tastefully arranged, and a large basket bouquet for centre table, without handle, arranged with much skill. By William Newcomb, of Pittstown, a flat bouquet for mantle vase, arranged most beautifully with rare dahlias, roses, verbenas, carnations, &c., &c., to which the premium of two dollars was awarded.—WM. NEWCOMB, *Chairman*.

FLOWERS.—The committee on flowers report that there was exhibited by V. P. Douw, of Wovenhook, a large collection of annual and perennial flowers, numbering over forty varieties; fifteen varieties of roses, among them *La Reine*, *Solfaterre*, *Rivers*, &c.; and fifteen varieties of pelargoniums. By Col. Rathbone, of Kenwood, a collection of over fifty varieties of annual and perennial flowers; sixteen varieties of pelargoniums; sixteen varieties of Hybrid Perpetual and *Isle de Bourbon* roses; seventeen varieties of verbenas, and a choice collection of carnation and picotee pinks. By James Wilson, a distinct and very beautiful seedling phlox, with pink ground and white stripe through the centre of the petal; roses and dahlias in variety. By William Newcomb, of Pittstown, a collection of over eighty varieties of annual and perennial flowers, among them were several very beautiful double hollyhocks, and a great variety of dahlias.

PREMIUMS.—The premiums were awarded as follows:—

ON DAHLIAS.—For the best exhibition, to William Newcomb, \$3.

For the best twelve varieties, to William Newcomb, for *Constantia*, *Lady St. Maur*, *Fulwood Scarlet*, *Golden Souvenir*, *Antagonist*, *Robert Burns*, *Col. Baker*, *Ansell's Unique*, *Baron*, *Cleopatra*, *Mrs. Rushton*, and *La Tour L'Auvergne*, \$2.

For the best six varieties, to J. Wilson, for *Model*, *Melanie Adam*, *Cheltenham Queen*, *Constantia*, *Minerva*, and *Standard of Perfection*, \$1.

For the best display of annual and perennial flowers, to William Newcomb, \$2.—For the committee, SANFORD HOWARD, *Chairman*.

VEGETABLES.—The committee on vegetables, report that the exhibition was a very choice one, the exhibitors having brought forward several new and delicious looking varieties.

Dr. Herman Wendell, Swiss Chard or Silver Beets. The tops or stems of the leaf of this vegetable are cooked and eaten as is asparagus, and, as far as appearance goes, it is the most luscious looking vegetable we have seen this season; their fresh, dewy, and crisp creamy stems, made the mouths of some of the committee water in spite of the epidemic reports. Also, California Acorn squashes. The seeds from which these squashes were produced were received by Mr. Johnson, the secretary of the society, from the Patent Office last spring, who distributed them to several gentlemen; they appear to be very fine, and are nearly a month earlier than other summer squashes.

PREMIUMS.—The premiums were awarded as follows:—

On corn, for the best exhibited, to V. P. Douw, \$1.

On cucumbers of open culture, to Joel Rathbone, \$1.

On egg plants, to E. C. McIntosh, of Albany, \$2.

On squashes, to Dr. Herman Wendell, \$1.

On tomatoes, to Joel Rathbone, \$2.

The committee also recommend a special premium of one dollar to Dr. Herman Wendell, for the Swiss Chard; and one of the same amount to E. P. Prentice, for four varieties of tomatoes, being the greatest number exhibited by one person.—B. P. JOHNSON, *Secretary*.

ART. IV. *Massachusetts Horticultural Society.*

Saturday, August 4th, 1849.—An adjourned meeting of the Society was held to-day,—the President in the chair.

Mr. C. M. Hovey presented the following votes, which were passed unanimously:—

Voted, That the members of the Massachusetts Horticultural Society having learned, with feelings of the deepest regret, of the death of their respected fellow-citizen, the Hon. Theodore Lyman, an honorary member of this association, and the munificent donor of a liberal sum for the promotion of the objects of the Society, therefore,

Voted, That, in the sudden death of Mr. Lyman, the community have sustained a severe loss and the Massachusetts Horticultural Society one of its most ardent and enthusiastic friends. Deeply interested in all that pertains to the cultivation of the earth, and endowed with a true taste for landscape beauty, his example, as evinced in the arrangement of his own elegant grounds, had a high influence in disseminating a love for horticultural pursuits.

Voted, That the Society sympathise with the family of Mr. Lyman, in their afflicted bereavement, and respectfully tender their condolence.

Voted, That the above be placed upon the Society's records, and a copy of the same be transmitted to the family of Mr. Lyman, by the Corresponding Secretary.

The following members were elected :—

Geo. T. Blake, H. B. Stanwood, Henry Poor, and J. P. Goddard, Boston ; Peter Smith, Andover ; Henry Shimmmin, W'ertown.

Adjourned two weeks to August 18th.

Exhibited.—**FLOWERS**: From J. Breck & Co., A. Bowditch, Messrs. Winship, J. Hovey, J. Nugent, P. Barnes, E. Burns, Miss Barnes and Miss Russell, cut flowers, bouquets, &c., &c. From J. G. Swan, indigenous flowers. From Rev. H. A. Graves, a collection of Melocacti from Jamaica, W. I.

GRATUITIES AWARDED.

To P. Barnes, J. Breck & Co., J. Hovey, E. Burns, Miss Barnes, Miss Russell, J. Nugent, Messrs. Winship, J. G. Swan, and A. Bowditch, \$1 each, for cut flowers, bouquets, &c., &c.

FRUIT: From Hovey & Co, Muscat of Alexandria, Victoria, Macready's Early White, White Chasselas, and Chasselas Bar-sur-aube grapes ; Jacques peaches, raised in pots, very fine ; Seedling cherries, and specimens of the Guava, (*Psidium Cattleianum*.) From A. D. Weld and A. D. Williams, White and Red Dutch currants. From O. Johnson, Houghton's Seedling gooseberries, Franconia raspberries, and Black figs. From J. F. Allen, fine peaches and nectarines. From O. N. Towne, three kinds of grapes. Blackberries, very fine, from C. E. Grant and Galen Merriam. From J. Hovey, fine Early Harvest apples and Seedling gooseberries. From J. Nugent, Black Hamburg grapes.

August 11th.—*Exhibited*.—**FLOWERS**: From M. P. Wilder, Perpetual Roses, Phloxes, and other flowers. Phloxes, Balsams, and other flowers, from Hovey & Co., Breck & Co., J. Nugent, A. Bowditch, T. Needham, J. Hovey, P. Barnes, Messrs. Winship, and others. The balsams of Mr. Needham, which obtained the first prize, were very fine.

PREMIUMS AND GRATUITIES AWARDED.

BALSAMS.—For the best display, to T. Needham, \$3.

For the second best, to J. Nugent, \$2.

For the third best, to Breck & Co., \$1.

GRATUITIES.—To Breck & Co., for cut flowers, \$1.

To M. P. Wilder, for cut flowers, \$2.

To P. Barnes, for the same, \$1.

To Messrs. Winship, J. Hovey, J. Nugent, and A. Bowditch, for bouquets, \$1 each.

FRUITS: From O. Johnson, M. of Alexandria, B. Hamburg, Zinfindal, and W. Frontignan grapes, very fine ; also, blackberries, figs, and Madeleine pears. From J. Nugent, 3 var. grapes. From W. A. Strong, B. Hamburg grapes and Peach plums. From A. Bowditch, grapes. From J. F. Allen, Whortley Hall grapes, and peaches and nectarines. Blackberries, fine, from C. E. Grant and G. Merriam.

From Hovey & Co., B. Hamburg, August Muscat, Macready's Early White, M. of Alexandria, (very fine,) W. and Grizzly Frontignan, (very fine,) W. and R. Chasselas, Muscat Blanc Hatif, Muscat Jesus, and Chasselas Bar-sur-aube grapes ; also three dozen splendid Jacques peaches.

From A. H. Ernst, Summer Queen apples. From E. M. Richards, Christiana melons. From B. V. French, currants, blackberries, and apples. From A. D. Weld, Sugar-top pears. Seedling plums from C. Stearns. From H. K. Moore, Moor Park apricots. From J. Hovey, Early Harvest apples and plums. From W. W. Whieldon, melons.

The committee report that some seedling cherries, raised by H. Vail, Esq., of Troy, were received in a somewhat decayed state, and that they could not so well judge of their quality; but, from their being so late, and said to be an abundant bearer, the cherry promises to be a valuable acquisition. Gros. Bleu grapes, a new black variety from Hovey & Co.; they promise to be of good quality.

VEGETABLES: From W. W. Whieldon, Egg Plants and Canadasquashes. From A. D. Williams, tomatoes, and Chenango and Early White potatoes. From N. Green, Manchester Prize cucumbers.

August 18th.—An adjourned meeting of the Society was held to-day,—the President in the chair.

A copy of the Eighth Volume of the *Transactions of the New York State Agricultural Society*, was received from B. P. Johnson, the secretary, and the thanks of the Society were voted for the same.

Adjourned one week, to August 25th.

Exhibited.—**FLOWERS:** From the President of the Society, seedling phloxes, and other flowers. From Breck & Co., seedling phloxes, two or three of them very fine; the prize stand contained nine seedlings and *Nymphaea alba*; also, a display of annuals, &c. From M. P. Wilder, a fine collection of phloxes, heaths, perpetual roses, &c. From Hovey & Co., thirty varieties of new and fine phloxes; the prize stand contained *Princesse Marianne*, *Robert de Flandres*, *Thesé*, *Rosetta*, *alta clerensis*, *Blanc de Neuilly*, *Œil de Lynx*, *Annais*, *Marchantia speciosa*, and *speciosa*. From J. W. Brown, gardener to Col. Winchester, fine balsams, asters, phloxes, &c. From H. S. Waldo, very fine balsams. Bouquets, cut flowers, &c., from J. G. Swan, P. Barnes, Miss Barnes, J. Nugent, T. Needham, J. Hovey, Miss Russell, L. Davenport, A. Bowditch, Miss Kenrick, Mrs. Dagget and others.

PREMIUMS AND GRATUITIES AWARDED.

PHLOXES.—To Jos. Breck & Co., for the best ten distinct varieties, \$6.

To Hovey & Co., for the second best, \$4.

To M. P. Wilder, for the third best, \$3.

GRATUITIES.—To Miss Barnes, Miss Kenrick, and Miss Russell, for baskets of flowers, \$1 each.

To Messrs. Winship, J. Nugent, and A. Bowditch, for cut flowers and bouquets, \$1 each.

To P. Barnes, T. Needham, and J. W. Brown, for cut flowers, \$1 each.

To M. P. Wilder, for ericas and roses, \$2.

To J. Hovey and J. G. Swan, for bouquets, \$1 each.

To Miss Dagget, for a plant of *Vallota purpurea*, \$1.

FRUIT: From M. P. Wilder, Monsieur Hatif plums, very good: Mr. Wilder thinks this may be identical with the Italian Damask. From J.

F. Allen, nectarines and peaches, and two fine clusters of a new grape, the largest weighing three pounds, called the Bishop. From T. Needham, four varieties of grapes. From A. Bowditch, Black Hamburg grapes. From C. Newhall, M. of Alexandria and B. Hamburg grapes. From W. C. Strong, grapes, five sorts. From Breck & Co., Fondante d'Ete and Belle d'Aout pears.

From Hovey & Co., nine varieties of grapes, including the Cannon Hall, and two dozen fine peaches. From H. Vandine, several kinds of plums. From O. Johnson, three sorts of grapes, figs, Franconia raspberries, blackberries, and pears. From Jos. Richardson, Italian Damask plums. From G. Merriam, peaches and French Jargonelle pears. Currants, pears, and other fruits, from A. D. Williams, Messrs. Winship, S. W. Cole, John Hovey, and George Newhall, and others

August 25th.—An adjourned meeting of the Society was held to-day—the President in the chair.

Letters were received and read from the Chester County Horticultural Society, Penn., and the New Haven Horticultural Society, Conn., inviting a delegation from this Society to be present at their respective annual exhibitions.

Voted, That a minute of the reception of the letters be made upon the records, and an acknowledgment forwarded to the societies by the corresponding secretary.

Voted, That a delegation, consisting of five members, be appointed by the chair to attend the annual exhibition of the New Haven Horticultural Society, and Messrs C. M. Hovey, Joseph Breck, Josiah Lovett, 2d, Ebenezer Wight, Wm. T. Austin, were appointed delegates.

Voted, That the societies to whom an invitation was extended last season be invited to be present at the coming annual exhibition.

A communication was received from Lawrence Young, Esq., of St. Louis, Mo., in regard to the use of lime as a preventive to the ravages of the curculio upon the plum, and it was

Voted, That the letter be placed in the hands of the committee of publication, to be printed with the Transactions of the Society.

Exhibited.—**FLOWERS**: Phloxes, in variety, and other fine flowers, from M. P. Wilder, Breck & Co., P. Barnes, and T. Needham. Cut flowers, bouquets, &c., from A. Bowditch, Miss Barnes, Miss Russell, J. Hovey, W. Kenrick, J. A. Kenrick, Messrs. Winship, J. Nugent, and others.

GRATUITIES AWARDED.

CUT FLOWERS, &c.—To M. P. Wilder, Breck & Co., P. Barnes, and T. Needham, \$1 each.

BOUQUETS, &c.—To Miss Russell, Miss Barnes, Miss Kenrick, A. Bowditch, J. Nugent, J. Hovey, and Messrs. Winship, \$1 each.

FRUITS: From Hovey & Co., eleven varieties of grapes, including the Zinfandel, Chaptal, White Nice, and Wilmot's No. 16 Hamburg. From O. Johnson, three kinds of grapes, Early Bough apples, Black figs, Dearborn's Seedling and August Muscat pears, Washington, Brevoort's Purple, and one other kind of plum, and a nectarine. From W. W. Merrill, fine

Washington plums. From E. M. Richards, two fine Christiana melons. From Geo. Newhall, one of the same. From Warren G. Rayner, Salem, fine Rostiezer pears. From M. H. Simpson, Saxonville, Washington plums. Grapes, of several kinds, from W. C. Strong, T. Needham, A. Bowditch, and Jas. Nugent. Bartlett pears, from a graft of last year, by W. Curtis. From H. Vandine, Jefferson, Yellow Gage, and Orleans plums.

PREMIUMS AWARDED ON FRUITS.

CURRENTS.—To Messrs. Hovey & Co., for the best specimens, (Victoria,) \$5.

To Geo. Wilson, for the second best, (White Dutch,) \$3.

MELONS.—To Geo. Newhall, for the best, (Christiana,) \$5.

To E. M. Richards, for the second best, (Christiana,) \$3.

RASPBERRIES.—To J. Lovett, for the best specimens, (Knevet's Giant,) \$5.

To Jos. Richardson, for the second best, (Franconia,) \$3.

BLACKBERRIES.—For the best, to G. Merriam, \$5.

For the second best, to O. C. Grant, \$3.

SUMMER APPLES.—To John Hovey, for the best specimens, (Early Harvest,) \$6.

To O. Johnson, for the second best, (Bough,) \$4.

No summer pears worthy of premium.

ART. V. *Obituary.*

DEATH OF HON. ELIAS PHINNEY.—We regret to announce the death of this distinguished agriculturist and friend of horticultural improvement, which took place at his residence in Lexington, Mass., on the 24th of July, at the age of seventy years. Mr. Phinney was one of the most scientific and practical cultivators in New England. His farm was an object of great attraction, and was visited by gentlemen interested in agriculture from all parts of the country. By his enterprise and industry, his estate, naturally hard and rather sterile, was transformed into fertile pastures, arable fields and fruitful orchards. Mr. Phinney also did much to improve the breed of dairy cows, and the Massachusetts Agricultural Society placed the valuable stock, imported by them, under his care. Notwithstanding his arduous duties as clerk of the courts of Middlesex for many years, he found the leisure to attend to the labors of his farm, every department of which was superintended by himself. In his death, the agricultural interest has sustained a severe loss.

DIED, at his residence in Lansinburg, N. Y., on the 4th of August, ALEXANDER WALSH, Esq., in the 67th year of his age. Mr. Walsh was an eminent merchant of Western New York, and a devoted friend of horticulture and agriculture.

HORTICULTURAL MEMORANDA

FOR SEPTEMBER.

FRUIT DEPARTMENT.

Grape Vines in the greenhouse will now have fully ripened their fruit, and probably a greater part of it has been cut; but if any remains, the house should be kept dry and well aired. They will need looking over occasionally to keep off the laterals, which will continue to push from the joint where they were last stopped. Keep the house open in all good weather in order to ripen the wood. Our directions for the management of the vines in the greenhouse last month may now be applied to the cold house, where the fruit will be changing color rapidly, and some of the earlier kinds nearly ripe. Air early and close up in good season at night; keep the house as dry as possible, especially in dull weather. Vines in the open air should now be divested of all the useless wood not wanted for next year; this will admit of the wood ripening more freely, and swell it up to good size.

Strawberry beds may now be made with good success. Have the ground well dug or trenched and manured. Set out the plants, and, if the weather proves dry, give an occasional watering until well established.

Raspberry plantations may be made this month with good success. The ground should be well prepared.

Currant and Gooseberry bushes may be planted this month.

Peach trees, in pots, should now be placed where they will have an abundance of light and air to well ripen the wood.

Budding of all kinds should now be completed, as delay now is attended with danger. See to the early budding, that the ties are not girdling any of the rapid growing stocks.

FLOWER DEPARTMENT.

Dahlias will now be in full bloom, and will require some attention if good flowers are wanted; attend to the pruning of the plants and the tying up of the shoots; pick off all small buds, and continue to water every other day over the foliage.

Pelargoniums should now be repotted; reduce the old ball and place them in small pots, in a rather light soil.

Carnations and Picotees.—Layers should now be taken up and potted, using about four inch pots; where there are considerable quantities they may be placed in a cold frame, and in this way may be wintered with safety.

Camellias should now be got in readiness for their winter quarters; the pots should be washed, the soil top-dressed, and the leaves, if dusty, carefully washed. Seeds should be carefully looked after, or they will drop from the capsules and be lost. They may be planted immediately.

Ixias and Sparaxis may be planted this month.

White Japan and other lilies may be planted this month.

Chrysanthemums should be shifted now, if not already done. Plants

layered should be cut from the old plant the last of the month, and immediately repotted and shaded a few days.

Roses should be taken up and repotted the last of the month. Plants raised from cuttings or layers should now be potted off.

Mignonette and *Sweet Alyssum*, in pots, should be kept in a frame and carefully watered.

Cyclamens should now be repotted, if not already done.

Peonies, of the herbaceous kinds, may be safely and successfully transplanted this month.

Verbenas should now be propagated, both by layers and cuttings, for a spring stock.

Ericas and *Epacris*es should now have a shift into larger pots, if they need it.

Gloxinias, *Achimenes*, &c., done flowering, may be placed away on a dry shelf.

Gesnera zebrina and late started *achimenes* should be shifted into larger size pots.

Oxalies of all kinds should be potted now.

Nemophila insignis, sown last month, should now be potted off into small pots.

Azaleas should now be put into a frame or the greenhouse, where they can be sheltered from heavy rains.

Herbaceous plants, of all kinds, may be safely transplanted this month.

Chinese primroses in small pots should be shifted into larger size.

Orange and *Lemon trees*, turned out into the open ground, should now be taken up and potted.

Salvias, of all kinds, should now be propagated for a spring stock.

Cactuses should now be rather sparingly watered.

Victoria, 10week and other stocks may yet be sown; those planted last month should now be potted off singly in thumb-pots. Large plants in the ground should now be taken up.

Napolean violets should be taken up carefully, and planted out in a frame this month. Such as are wanted for blooming during winter in pots should now be taken up and potted.

Abutilons, planted out for blooming during summer, should now be taken up and potted.

Pansies, raised from cuttings or layers, should now be set out in prepared beds, according to the directions of Mr. Turner in our July number.

Schizanthuses, sown last month, should now be potted off, placing three plants round the sides of a small pot.

Cinerarias should now be divided at the root, and potted singly into 4-inch pots.

Tulip beds should now be prepared for the roots by turning over the soil, so that it may be well settled before November.

Japan lilies, in pots, should now be sparingly watered.

Greenhouse plants of all sorts should now be got in readiness for their winter quarters.

THE MAGAZINE OF HORTICULTURE.

OCTOBER, 1849.

ORIGINAL COMMUNICATIONS.

ART. I. *The Blight in Pear Trees.* By J. H. JAMES, Esq.,
Urbana, Ohio.

IN a foot note to the article on the blight in pear trees, published in the January number of your Magazine, you assure me, that the destructive blight of the West, is distinct from the insect blight as described by Mr. Lowell, and you promise to discuss the subject in another number, and to show, on the authority of Dr. Harris, the true nature of the insect blight.

You have not recurred to the subject, and I resume it. In the article referred to, I have given an extract from Dr. Harris's Book on Insects, which contains all he says on the *Scolytus pyri*, and the blight in pear trees. This authority is to me conclusive proof, that there is no such thing as insect blight in pear trees. The account given by Mr. Lowell, which is followed by Dr. Harris, is thus:—"The insect had eaten from the root of a bud, behind which, *probably*, the egg was deposited, following the course of the eye of the bud into the pith, which he had consumed, together with all the heart wood." All the descriptions of insect blight that I have read, are copied from this description of Mr. Lowell's, and, if the cause thus assigned is inadequate to produce blight, or death in the limb, the hypothesis must be abandoned.

It is here assumed, that the destruction of the pith and of the heart wood, would cause the limb to perish. If this were true, no hollow tree could live, and yet our forests abound with evidence, that trees will live for ages, with a mere shell

of sap wood, and with this means of support, the extremest branches continue green and flourishing. If the destruction of the pith and heart wood, would cause blight, no limb, broken beyond the centre, could ever live. But in the propagation of plants by layers, and in the planting of hedges, it is an every day's practice to cut beyond the pith, and even split the limb upwards, and the limb so treated, not only lives, but overcomes the wound, and maintains the successive annual growths at the extremity. If the sap wood remains entire, as it did in the case described by Mr. Lowell, the limb could not die, although the pith and heart wood should be taken away; even one fourth of the sap wood, if a live bark were adhering to it, would preserve the life of the limb, if the residue had been severed by the knife or by a storm; and to assume that the destruction of the pith and heart wood would cause its death, is not only unsupported by evidence, but is in the face of evidence to the contrary. If the blight in pear trees is caused by an insect, it is caused in some manner not yet described. At present we are bound to maintain that there is no such thing as insect blight in pear trees. Let me add, however, that there is an injury caused by insects, to the growing shoots of the pear, by which the extremity of the shoot droops and dies, but the only effect of this is, to cause the pushing of the next good bud below the injury. This kind of injury is confined to shoots that have not reached the woody state.

Your fire blights and ours have the same external characteristics, according to the descriptions given, and it is fair to conclude, that they are both produced by the same cause.

The injury is caused by cold, occurring at some period of active growth, when the tree is not prepared for the exposure. The effect is not shown by killing the young shoots, for they always put forth their leaves the next year, and this disposes of the surmise about unripened wood. The injury is always to the trunk, or the larger limbs of the tree, and is nearly always confined to a small spot, producing a girdle of dead bark, which is followed by the death of all that part which is above the injury. For, although a tree may, by the heart wood only, put forth its leaves and make long shoots of new wood, it cannot continue to live, without a living passage maintained between the bark and alburnum, from

the leaves and spray to the roots of the tree. This injury occurs either in autumn or in the spring, and, perhaps, at both periods. The general effect is, most probably, produced in the spring, for it is found that those localities, where the fruit usually escapes destruction by spring frosts, are measurably exempt from fire blight. The Detroit River and the Niagara are instances of this.

As a means of avoiding this evil, it is of great importance to graft only on hardy stocks, of a tried kind. I have lost two trees, where the injury was in the stock only, and below the graft. It is also desirable to have the graft near to the ground, so that the entire trunk may be of the kind sought. A very moderate protection to the trunk will preserve it from injury, such as a hay-band enveloping its whole length, a mat drawn loosely round it, or even a single fold of coarse cotton. If the trunk be saved, even should the limbs perish, a new head will soon be formed, to supply the place of the one destroyed. Mr. Downing tells us that he has arrested the progress of blight, by cutting off the limbs and burning them. His supposition is, that he thus destroyed the insects contained in the limb, and prevented further depredations. I have seen trees that were never lopped at all, when the limbs had been blighted, and the blight has equally ceased and disappeared from the neighborhood, so that the burning and the non-burning seem to have the same effect. The ready and obvious explanation is, that the blight disappeared because it is not a thing of annual recurrence, but only happens in peculiar seasons, which experience proves may occur only at long intervals.

I feel great confidence, Mr. Editor, that there is no such thing as insect blight in pear trees, and we may, therefore, drop the distinction of frozen sap blight, and come back to the old name of fire blight, which was given from the appearance of the effect produced, and does not mislead us. I submit, again, to your consideration, that the true point of inquiry is, to learn how the invasion of cold acts upon the tree, so as to produce that local engorgement of sap which speedily ferments and then dries away, and leaving a dead girdle round the trunk or limb, and, of course, killing the top above it.

Urbana, August 24, 1849.

We have not forgotten our promise to show that there is such a thing as insect blight of the pear, and that it is quite distinct from the blight of the West. We trust that, by the assistance of our friend, Dr. Harris, we shall convince our correspondent, Mr. James, of this, and will refer him to a future number, to see this satisfactorily explained.

We are glad to see Mr. James proposes that the true name should be applied to the disease—if so it can be called—that is, the *fire* blight; frost has no more to do with it, than in causing the potato rot, and no individual who has carefully observed it, will venture to assert this. It is, undoubtedly, the result of a peculiar state of the atmosphere, in connection with moisture and heat, and only prevalent when such a state exists. What are the best means of guarding against it, remains to be ascertained. Mr. James's article should be carefully read, and we hope it may lead to further investigation, and, in the end, to the means of preventing it, or, at least, of checking its attacks.—*Ed.*

ART. II. *Hints on Pruning.* By R. B. LEUCHARS, New Haven, Conn.

As the proper period for this operation is now drawing near, I hope a few hints will not be unacceptable to your readers. I am aware that there is no lack of eminent writers upon this subject, but there is abundant scope for all. A wide field is presented for the occupation of our thoughts and the exercise of our energies, and a correct knowledge of these matters can only be obtained by a unity of purpose—a unity of action—and a unity of observation. If proofs were wanting to show the indifference of what may be termed ripened wood, to heat, cold, drought, and moisture, when compared with unripened wood, which, though apparently thrifty enough, is, nevertheless, more vascular, and has made less wood in proportion to its bulk, we have plenty of illustrations of the above fact, this season, in this locality. We have abundant evidence that a tree, like any

thing else in nature, must have its elements so adjusted that combination between them and the air may take place regularly and rapidly, when they are brought into action, that properly organized wood may be formed. When this is not the case, and certain elements are present in excess, decomposition takes place in the redundant secretions; the decay of the parts, and the ultimate death of the tree, is the consequence.

If we consider the various parts of the stem of a tree, viz., the pith, the wood, the medullary rays, and the bark, to consist of bundles of small, hollow tubes, of various sizes, and of different kinds, intended to contain liquid and gaseous substances, and to convey them to different parts of the tree; moreover, if we consider the root as the lateral prolongation of the stem downwards into the earth, and the branches as the upward prolongation of the stem into the air, which circumstance is, in some measure, proved by the facility with which branches may be transformed into roots, and roots into branches, the original position of a tree may thus be reversed, and the roots and branches, being thus mutually convertible, must, in their general structure, be very much alike. Lastly, if we consider the leaves and spongioles as performing analogous functions, and acting reciprocally upon each other, which is evident from the appearance of trees in a hot day, the supply of moisture inhaled by the roots being too small for the quantity exhaled by the leaves, at the extreme points of the roots, the bark becomes white, soft and spongy, a perfect mass of mouths, or pores, and vessels. It is by these spongy extremities that liquid or gaseous elements are capable of entering into, or making their escape from, the interior of the root. The branches and twigs, in like manner, are extensions of the trunk, and the leaves may be considered as a still further extension. The fibres of the leaves are minute ramifications of the woody matter composing the shoots, and are by them connected with the larger branches, and through them receive the sap which they contain. The green part of the leaves may be considered as special expansions of the bark, by which it is fitted to act upon the air in the same way as the spongy terminations of the roots are fitted to act upon the water, and other substances they meet with in the

soil; for, as the fibres of the leaves are connected with the wood of the stem, so the green portion of the leaves are connected with its bark, and by this, part of the juices of the tree are acted upon by the elements of the atmosphere. The green part of the leaf may thus be termed the laboratory of the tree; there, the materials for future fruit buds and flowers are separated from the sap; there, the woody fibre is formed and prepared for the next year's layer; and, as the superfluous, unassimilated sap descends, it is deposited beneath the inner bark, and forms what we call the annual ring or layer of wood.

Now, if we will give these considerations their due weight, I think we will pause a little before we apply the pruning knife, either to the root or branch of a fruit tree, and ask ourselves the question, How can we best assist nature in maintaining this reciprocal activity, so that a due amount of sap may be assimilated and concentrated for the production of fibre and fruit?

I believe it will be admitted, that when a tree is growing quick and luxuriant, there is less concentration of sap by the leaves, than when the young shoots are less vascular and more woody. More water is absorbed by the roots, because more is demanded by the leaves to form young shoots, and to supply the loss by excessive natural perspiration, as well as mechanical evaporation. The absorbing roots are forced into an unnatural state of activity, which continues long after the leaves have ceased to perform their functions, and when they no longer demand the supply. Hence, the breaking of the buds in autumn, the bursting of the bark in winter, and the growth of late shoots, which never ripen.

The general panacea for these evils, is to *prune*, i. e. to cut off a certain quantity of branches from the tree, in winter—very frequently the lower ones are taken away, and the stem is left bare. The exterior sap vessels are thus exposed, without shade or shelter, to the influence of the burning sun in summer, the rays of which, by reflection, frequently rise to 120° Fah., a fertile source of what is termed sun blight: and more, those branches are taken off which alone were capable of modifying the current of ascending sap in its upward course, by drawing it off into the lateral branches. I

am of opinion, that this winter-pruning cure is worse than all the other evils put together. I am happy to see that some able horticulturists are now raising their voice against this unpractical barbarism, a practice as unnatural as it is unprofitable. It is like setting the trees on stilts, under the ill-judged pretext of cropping the ground beneath them. If a tree is worth root-room in the ground, it is worth head-room in the air; and if it is not worth both these, it is worth nothing at all, except for ornament; and, if it is not wanted for ornament, it should be cut down. But a fruit tree may be both useful and ornamental, and abundantly pay for the garden room that it occupies; and those who have little garden room to spare for fruit trees, should try the system of growing small pyramidal or conical trees, clothed with branches, from the ground upwards. It is very easy, during summer, to stop the wood-making propensities of a tree, by depriving it of the power of drawing excessively upon the roots for moisture, and the roots, in like manner, may be placed into a position to imbibe healthful secretion for its nourishment.

Notwithstanding all the volumes that have been written on the motion and circulation of vegetable fluids, we are still in the dark as to the *proper* time, season, or period of the year for cutting the roots or branches of a tree. We may reason ourselves, individually, into the supposition of one period being better than another,—but where is the proof? Experience has taught us, that autumn is the best time for what is called winter pruning, immediately on the fall of the leaves, or when they can be shaken from the tree; but even then the sap is sensibly in motion. Still, we know that spring pruning is bad; that pruning in mid winter is little better; and where severe pruning *must* be done, that autumn pruning is the best of all, both for roots and branches, and this, too, is the slackest time of the whole workable season, yet, not in one case out of ten, is it taken the advantage of to get the pruning work accomplished. Will some of our extensive horticulturists direct their attention to this matter, and give us the benefit of their experience.

New Haven, Conn., Sept. 1849.

We must commend this excellent article to the attention of all cultivators.—*Ed.*

ART. III. *Descriptions and Engravings of Select Varieties of Pears.* By the EDITOR.

IN the dearth of fruit the present year, more particularly of pears, we are unable to complete our descriptions of many new varieties, or to secure specimens of other fine sorts, of recent introduction into our collection. We, therefore, improve this opportunity to give an account of some of the older kinds, which are found in general cultivation, and which are of interest to the pomologist and fruit cultivator. They will not all come under the denomination of select pears, perhaps, but as our descriptions and engravings are to serve two purposes, viz., to make known the new and fine kinds, and to aid in the identification of old ones, we include them under this head.

115. SUMMER BONCHRE'TIEN. *Pom. Mag.*, vol. 1, pl. 14.

Boncrétien,	}	<i>Pom. Mag.</i> , vol. 1.
Bonchrétien d'Ete,		
Die Sommer Christbirne,		
Die Gate Christbirne,		
Sommer Gute Christenbirne, grosse,	}	<i>Hort. Soc. Cat.</i> , 1842.
Gratioli,		
Gratioli d'Ete,		
Gratioli de Roma,		
Summer Apotheckerbirne,	}	Richards's Beurré, of some collections in New York.

This very old pear, (*fig. 36*) which has been cultivated all over Europe, and, to a considerable extent, throughout the northern and eastern sections of this country, is supposed to have originated in the early part of the sixteenth century. It has been mentioned or described in every pomological work of any note, for more than one hundred and fifty years. It was one of the first pears introduced by the early French settlers into America, and very old and large trees are found growing in various parts of the country. Varying very much in its quality, according to soil and locality, it has been, and still is, thought by many to be a very fine pear; and, two years ago, it was described in the *Horticulturist*, as a new

variety, under the name of Richards's Beurré, and pronounced superior to Swan's Orange. When well grown and ripened, it is a most beautiful fruit; the skin being of a rich

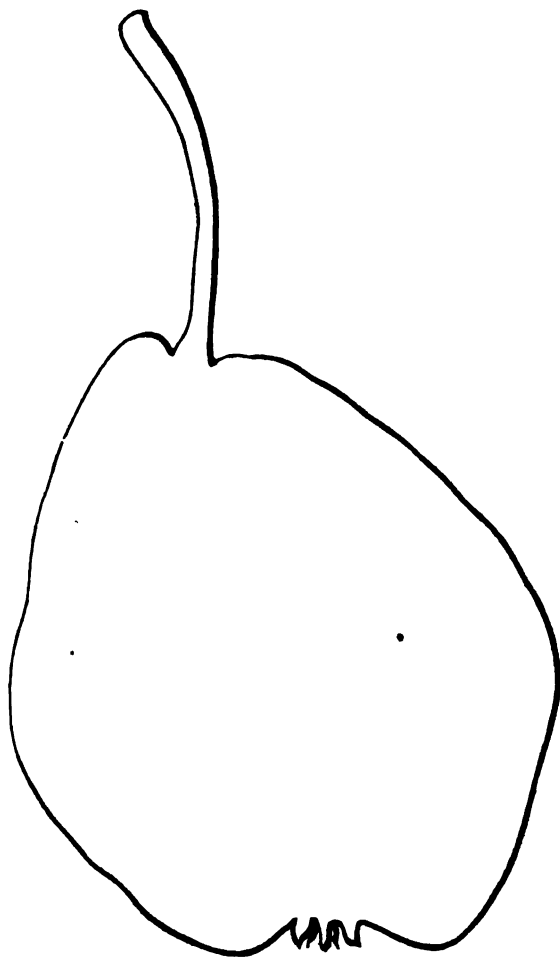


Fig. 36. Summer Bonchrétien Pear.

yellow, covered on the sunny side with a brilliant red. The flesh is between breaking and melting, and the flavor sugary and good.

The *Pomological Magazine* states, that "its place is too
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often supplied by inferior varieties, whose merits are more frequently novelty than excellence;" this was in 1832; but now that we have so many fine pears, this can scarcely be true with us; yet it is so good a fruit that those who possess large trees should retain it in cultivation.

The tree is a somewhat rambling grower, with straggling branches, and roundish, wavy leaves. It does not succeed upon the quince, and should always be worked on the pear.

Size, large, about three and a half inches long and two and a half in diameter: *Form*, obtuse pyramidal, knobby and very uneven in its outline, large in the middle, narrowing to the eye, and obtuse at the stem: *Skin*, fair, smooth, pale lemon yellow, often broadly tinged with bright red on the sunny side, and covered with small green and russet specks: *Stem*, long, one and a half to two inches in length, rather stout, curved, little swollen at the base, and obliquely inserted in a small cavity on one side of a swollen lip: *Eye*, medium size, open, and rather deeply sunk in a large, unevenly formed, and open basin; segments of the calyx medium length, pointed, projecting: *Flesh*, yellowish white, little coarse, tender and juicy: *Flavor*, sugary, pleasantly perfumed and good: *Core*, medium size, little gritty: *Seeds*, long and pointed, mostly abortive. Ripe in August and September.

116. RONVILLE. *New Duhamel*.

The Ronville pear (*fig. 37*) is but little known to pomologists. The *New Duhamel* gives a beautifully colored figure and full description of it; but the *Catalogue* of the London Horticultural Society, for 1842, does not enumerate the true one, though it gives the name of Ronville as a synonyme of the Martin Sire, a crisp winter fruit, while the true Ronville is an autumn pear, with melting or half melting flesh. We only know of the existence of this variety in collections in Salem, and our specimens were given to us in 1844, by Mr. J. F. Allen, of that city, in whose garden there is a large tree, which uniformly bears good crops. In size, and general form and appearance, it so much resembles the Swan's Orange, that some cultivators have insisted upon it that the

latter was synonymous with it; but a single glance at the wood and leaves, allowing the fruit to be similar, at once decides their distinctness. Swan's Orange has a pale, yellowish

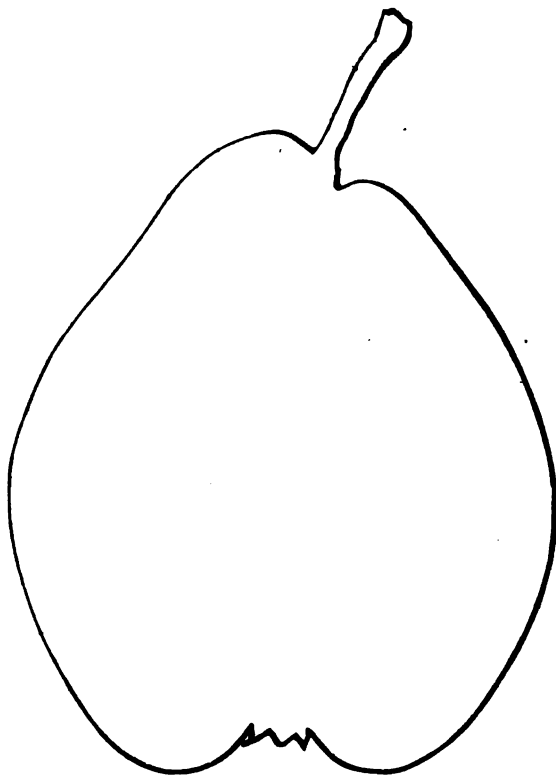


Fig. 37. Ronville Pear.

wood, while that of the Ronville is a deep olive green; in habit of growth they are very dissimilar.

Though the Ronville is a very good pear, and a profitable variety for the market, our account of it is now given in order to prevent any doubts of its entire distinctness from Swan's Orange; for the latter is too valuable a fruit to be so soon involved in the confusion which attaches to a large number of our best pears. The merits of the Ronville have, we think, been overlooked; yet it cannot be compared with Swan's Orange, which ripens at the same period.

Size, large, about four inches long and three and a half inches in diameter: *Form*, oblong, slightly flattened, largest in the middle, narrowing a little to the eye, and tapering to the stem, where it ends obtusely: *Skin*, fair, smooth, pale green, becoming yellowish when mature, somewhat russeted around the crown and stem, and regularly covered with brownish russet specks, thickest on the sunny side: *Stem*, medium length, about an inch long, rather slender, smooth, little swollen at the base, and obliquely inserted in a shallow cavity, formed by a few uneven projections of the fruit: *Eye*, medium size, closed, and sunk in a narrow, uneven basin; segments of the calyx, long and pointed: *Flesh*, white, coarse, tender and juicy, little gritty at the core: *Flavor*, sweet and pleasant, with a slight musky perfume: *Core*, large: *Seeds*, medium size, long, pointed, light brown. Ripe in October and November.

117. VALLEÉ FRANÇHE. Hort. Soc. *Catalogue*, 3d Ed., 1842.

De Vallée,	} Hort. Soc. <i>Cat.</i> , 3d Ed., 1842.
Bonne de Kienzheim,	
De Kienzheim,	

As late as 1842, the Vallée Franche (*fig. 38*) was classed among the first rate pears in the *Catalogue* of the Hort. Soc.; but, among the many recent accessions to American collections, it cannot be estimated above a second-rate fruit. It comes at a season when we have a good supply of large, handsome, and excellent pears, and as it does not keep long, its place can be supplied with better kinds. It is, however, a most abundant bearer, and in large collections it may have a place. It is one of the sorts which grow freely upon the quince, so much so that we have made use of it as a medium for double-worked trees.

Size, medium, about two and a half inches long, and two and a half in diameter: *Form*, obovate, broadest in the middle, and tapering to each end: *Skin*, fair, smooth, pale green, becoming yellowish when mature, russeted at the base of the stem, and regularly, but not thickly, covered with russet specks: *Stem*, long, about one and a half inches in length, moderately stout, slightly fleshy at the base, curved, and obliquely inserted in a very shallow cavity: *Eye*, large,

partially closed, and little sunk in a furrowed basin; segments of the calyx long, narrow, pointed: *Flesh*, yellowish, coarse, tender and juicy: *Flavor*, sweet, pleasantly perfumed,

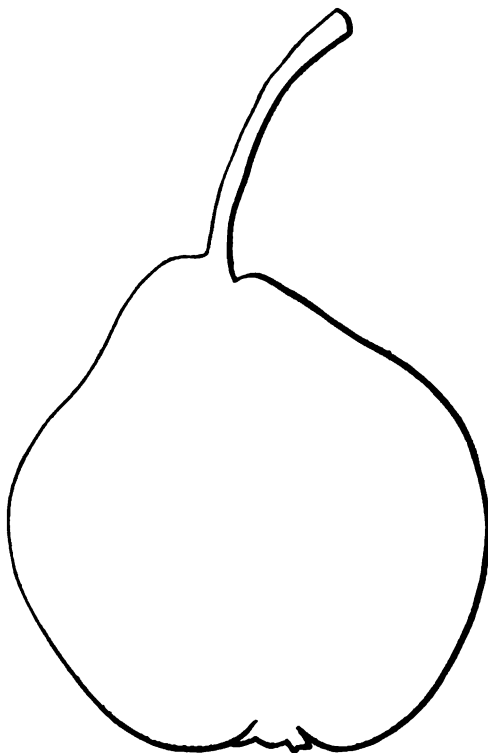


Fig. 38. *Valleé Franche Pear.*

and good: *Core*, large: *Seeds*, medium size. Ripe in August and September.

Like most pears of this season, they should be gathered and ripened in the fruit-room.

118. **PASSE COLMAR.** *Pom. Mag.*, vol. II, pl. 64.

Passe Colmar Epineaux, Colmar Epineaux, Colmar Gris, Passe Colmar Gris, Passe Colmar gris dit Precel,	}	Hort. Soc. Cat., 3d Ed., 1842.
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Beurré Colmar gris dit Precel,
 Precel,
 Fondante de Panisel,
 Fondante de Mons,
 Colmar Hardenpont,
 D'Ananas,
 Present de Malines,
 Marotte Sucreé Jaune,
 Souveraine,
 Colmar Souveraine,
 Gambier,
 Cellite,
 Colmar Preul,
 Colmar Doré,
 Beurré d'Argenson,
 Regentin,
 Chapman's,
 Passe Colmar Doré ? of some English Catalogues.

Hort. Soc. *Cat.*, 3d Ed., 1842.

Few pears can claim so high a character as the *Passe Colmar*, (*fig. 39.*) When well grown and properly ripened, we have thought that no pear of its season, or, we might perhaps say, of any season, could surpass it. It possesses a flesh of honied richness, combined with an agreeable aroma, and at its season of maturing, in January, is one of the best of pears.

The multitude of synonymes above quoted, is the best evidence of its superiority. Grown under favorable circumstances of soil and locality, it has received a new name, as it has passed out of the hands of various cultivators, until the synonymes have become more numerous than those of any other pear, except the *Doyenné Blanc*. Some English nurserymen still insist that there are two distinct sorts, which they call the *Passe Colmar* and *Passe Colmar Doré*; but, having fruited them both in our collection, we are inclined to believe they are alike, and have, accordingly, placed the latter among the other synonymes. It was raised by M. Hardenpont, of Belgium. The *Passe Colmar* is a most abundant bearer, and the fruit is often small, on account of its not being early and judiciously thinned; and when this is neglected, the pears do not attain their full size, and, in ripening, shrivel and become nearly worthless. From this circum-

stance, some cultivators have discarded it from their collections. Like all free bearing pears, it should have a rich and generous soil. The trees are very vigorous growers, and fre-

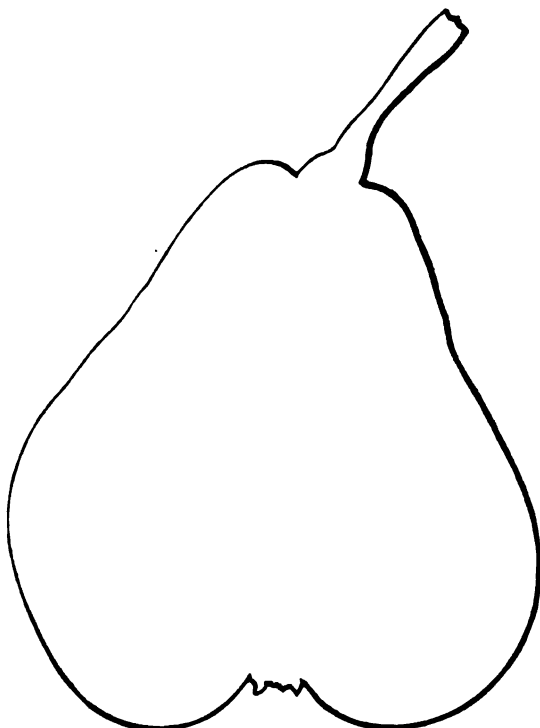


Fig. 39. Passe Colmar Pear.

quently flower and produce a second crop. On the quince it succeeds admirably, uniting well with that stock, and forming a handsome pyramidal tree. Wood, clear, yellowish brown; leaves, ovate, erect.

Size, large, about three and a half inches long and three in diameter: *Form*, obtuse, pyramidal, full at the crown, contracted in the middle, and obtuse at the stem: *Skin*, fair, yellowish green, becoming pale yellow when mature, somewhat traced with russet around the eye, broadly tinged with red on the sunny side, and dotted with scattered green and russet specks: *Stem*, medium length, about one inch long,

nearly straight, swollen and fleshy at the base, and obliquely inserted in a very shallow cavity: *Eye*, medium size, open, and little depressed in an abruptly sunk and round basin; segments of the calyx, short: *Flesh*, yellowish, fine, melting, buttery and juicy: *Flavor*, rich, saccharine, and delicious, with a delicious aroma: *Core*, medium size: *Seeds*, large, plump, brown. Ripe in December and January.

119. LONG GREEN OF AUTUMN.

Verte Longue d'Automne.

The Long Green of Autumn, (*fig. 40*) is one of the few pears which have not yet been extricated from the confusion of nomenclature. We do not find it distinctly described in any pomological work which we have consulted; but in almost every instance it has been confounded with the old *Verte Longue*, or Long Green.

Our first acquaintance with it was some time ago, in the collection of Mr. R. Manning; subsequently we received it from France, and afterwards we had it from several collections. Last year we received it again from France, as the Long Green, and now have specimens from these trees before us. It is quite distinct from the latter pear, being smaller, more oval, with a long stem, and always more or less tinged with dull red or brown on the sunny side.

Mr. Prince, in the *Pomological Manual*, evidently enumerates it as a synonyme of the *Verte Longue*, under the names of Autumn Mouthwater and *Verte Longue d'Automne*. The *Catalogue* of the London Hort. Soc. does not enumerate it; and neither Mr. Kenrick or Mr. Downing give any account of it. The similarity of name has, undoubtedly, been the cause of this omission, and writers, who have not been well acquainted with the fruit, have supposed that the addition of the word "autumn" to the name of *Verte Longue*, was only of local application, and did not imply a distinct fruit.

The variety is evidently one which is considerably cultivated in foreign collections, as we know of trees which have been received from various sources in France and Belgium. It is but little later than the *Verte Longue*, and it is to be regretted that some name less likely to lead to confusion, was

not adopted; but, the distinction once known, we hope, hereafter, the two varieties may readily be identified.

The tree is a vigorous grower, and succeeds equally well

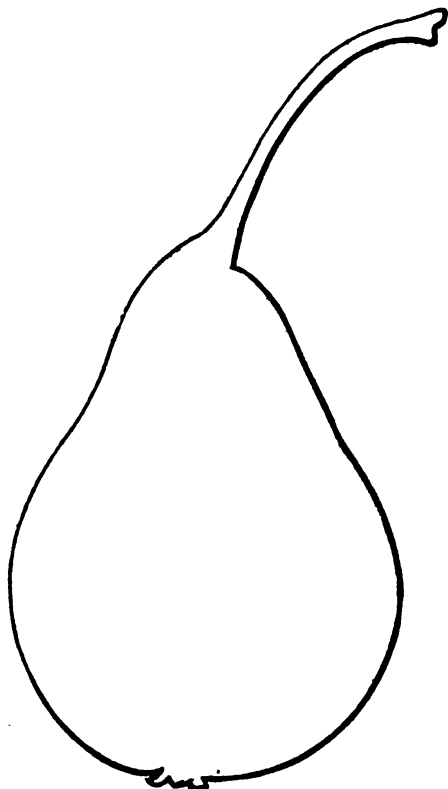


Fig. 40. *Long Green of Autumn Pear.*

on the quince, or pear stock; it is of upright habit, and the wood is of an olive brown shade, and dotted with large whitish specks. The fruit is in perfection three weeks later than the *Verte Longue*.

Size, medium, about three inches long and two inches in diameter: *Form*, pyramidal, round, and rather full at the crown, tapering to the stem, near which it is slightly contracted: *Skin*, fair, smooth, dull greenish yellow, dotted and marbled with brownish red on the sunny side, and regularly

covered with russet specks: *Stem*, long, about one inch in length, slender, curved, and obliquely inserted, without any cavity, in one side of a swollen lip: *Eye*, small, open, and set nearly even with the surface of the crown; segments of the calyx short, connected, reflexed: *Flesh*, yellowish white, fine, melting and juicy: *Flavor*, rich, slightly perfumed, and excellent: *Core*, small: *Seeds*, medium size. Ripe in October.

120. JULIENNE. Coxe's *View*, &c.

Summer St. Michael, of some collections.

Duquesne d'Ete! Hort. Soc. Cat., 1842.

The Julienne pear (*fig. 41*) was first described by Coxe, about thirty years ago; but whether a new or an old pear at

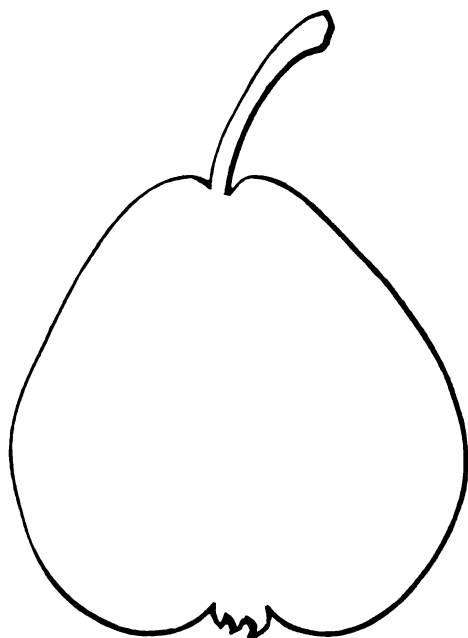


Fig. 41. Julienne Pear.

that time, he does not state; he intimates that it might be a synonyme of the Arch Duke d'Ete. Up to the present period,

however, in the multitude of kinds which have been introduced, no variety has been found like it; and we are almost forced to believe it to be a native fruit. In the autumn of 1844, we saw, in the collection of the London Hort. Soc., a variety called the Duquesne d'Ete, which we considered synonymous with the Julienne, but, without any more knowledge of that pear, we, for the present, continue the name of Julienne.

As an early summer pear, the Julienne has been considerably cultivated and introduced into most collections of this fruit. In some seasons and localities, it proves to be a fine variety, but from its variableness it is not so highly esteemed now as formerly. Coxe said, it was "certainly among our finest summer pears;" but this was at a period when the Tyson, Dearborn's Seedling, Cushing, &c., were unknown. It is a most abundant bearer, as well as a beautiful fruit, and, consequently, is a very profitable market pear. Like all summer fruit, it should be gathered rather early, and ripened in the house.

The tree is a very vigorous grower, with long, upright shoots, swollen at the ends; it comes early into bearing. Wood, very bright yellow.

Size, medium, about two and a half inches long, and two and a half inches in diameter: *Form*, regular, obovate, largest in the middle, and narrowing to the stem, where it ends obtusely: *Skin*, fair, smooth, clear lemon yellow, when mature, with, occasionally, a tinge of blush on the sunny side: *Stem*, medium length, about an inch long, rather slender, curved, and inserted in a small shallow cavity: *Eye*, large, open, and slightly depressed in a broad, shallow basin; segments of the calyx short, stiff, projecting: *Flesh*, yellowish, rather coarse, melting and juicy: *Flavor*, pleasant, sprightly, little perfumed, and good: *Core*, medium size: *Seeds*, small, very plump and round. Ripe in September.

The Julienne seems to prefer a rather light and warm soil, as all the specimens which we have had, from trees in such localities, have been better than those grown in heavy loams.

ART. IV. *Floricultural and Botanical Notices of New and Beautiful Plants figured in Foreign Periodicals; with Descriptions of those recently introduced to, or originated in, American Gardens.*

ABELIA RUPESTRIS.—This fine species is one of the most valuable fall flowering shrubs, growing to the height of five or six feet; it makes a fine, compact, conical bush, with neat, glossy foliage, and, from the middle of August to January, is literally covered with its dense heads of whitish flowers, which exhale a delightful odor. For bouquets it is a fine acquisition, as, at this period of the year, there are but few fragrant flowers except the heliotrope. It should have a place in every collection of plants.

HERACLEUM GIGANTEUM, belonging to the cowparsnep tribe, of which our correspondent, Prof. Russell, gave so interesting an account in our last number, (p. 394,) is advertised in the *Gard. Chronicle*, to be "one of the most magnificent plants" in the world; it is a biennial, and grows fourteen feet high in one summer, with a handsome fluted stem, six or eight inches in diameter, and a compound umbel of white flowers, twelve feet in circumference, with leaves from five to seven feet wide. It is figured in Mrs. Loudon's *Ladies' Companion*, p. 141.

NEW AND CHOICE ORNAMENTAL SHRUBS AND FLOWERS.—The editor of the *Chronicle*, in summing up the novelties of the year, gives the following list of fine things, which will be read with interest by all amateurs, as well as professional cultivators. We hope they will all be speedily introduced. —*Ed.*

At this season, when the lovers of plants are considering on what they shall rely for a supply of NOVELTIES in the coming years, it may be useful to point out the real value of some which are about to be offered for sale. For the present, we take a few of the examples to be found in Messrs. Veitch's Nursery at Exeter.

Fagus obliqua is an evergreen beech tree, of great beauty, growing from 30 to 40 feet in height. It inhabits Chili and

Patagonia, according to Mr. Lobb; Dombey reports it to grow in the interior of the provinces of Southern Chili, at an elevation of 1000—5000 feet. Capt. King is said to have found it at Port Famine. It is one of the Robles of the Chilenos, and of value for its heavy wood. It occupies, however, according to Dr. Joseph Hooker, only the lower elevations of the mountains, and will hardly bear the open climate, except in the southwest of England and Ireland.

Libocedrus tetragona (also called *Thuja tetragona*) is described by Mr. Lobb, as a tree of 50 to 80 feet in height, growing as high as the snow line on the Andes of Patagonia. It is a Coniferous plant, with four-cornered branches, which must be extremely handsome. Another species of *Libocedrus*, of greater stature, (80 to 100 feet, according to Mr. Lobb,) has also been raised. These two are said to constitute the famous Alerce of Chili, celebrated for its gigantic size, and the excellence of its timber. Specimens of Alerce are spoken of, 24 and 22 feet round, at 5 feet from the ground; others are said to exist "from 30 to 40 feet round, and from 80 to 90 feet in height to the first branches; above which the heads of these giants are said to rise some 40 or 50 feet more." No doubt they are among the finest Conifers in the world. Since they inhabit the same country as the Chilean Araucaria, and advance to the southward even as far as Port Famine, it is not improbable that they may be as hardy as that tree, and if so, they will be of very great value. Possibly one of these may be the genuine Alerce, and the other the Cypress of Chili, if, indeed, those trees are as distinct as is supposed by some writers.

Of Myrtle-like plants several have been obtained, especially a very pretty species called *Myrtus stipularis*. These will be about as hardy as the common myrtle.

A Berberry of unrivalled beauty, evergreen, with deep green foliage, and rich orange-yellow flowers, is *Berberis Darwinii*. It will, probably, be hardy.

Three *Escallonias* are raised, of which the *Escallonia macrantha* has become known as the finest of the genus, in consequence of its having been exhibited at one of the meetings in the Garden of the Horticultural Society. Two others are something like *E. rubra*, and will, possibly, have the same constitution.

Desfontainia spinosa; an evergreen shrub, with the leaves of a Holly, from the Andes of Patagonia, will scarcely be valuable on account of its flowers, which seem to be produced too sparingly in its native country. Its hardiness is uncertain.

Embothrium coccineum; a greenhouse shrub, with fine, firm, round foliage, and clusters of deep-red flowers, is a Prothead, and will, probably, turn out a fine thing for exhibition.

Ourisia coccinea, from Chiloe, is a herbaceous plant, with several long crimson flowers at the end of a scape, like that of a cowslip.

Luzuriagas, of which *L. radicans* and a new one are at Exeter, are greenhouse plants, with a very peculiar scrambling or trailing habit, short, furrowed, thin leaves, and multitudes of axillary, spotted, or spotless flowers, the size of a shilling. They are very pretty under-shrubs in their own country, and the flowers seem to hang on well, without fading quickly.

Virgularia lanceolaria, from North Chili, may be likened to a handsome, shrubby Pentstemon, with rose-colored flowers. It will not be hardy.

Argylia is an herbaceous genus of the Bignoniads, with tuberous roots, and leaves cut almost as much as curled parsley. The flowers grow at the summit of long, erect scapes, and are fine looking when dried. A species, new, but near *A. puberula*, said to have yellow flowers, is growing in Mr. Veitch's Nursery.

Among other plants, of less moment, are *Cordia decandra*, an evergreen shrub, with white flowers, from North Chili. If the white is pure, it may be a good plant, for the flowers are large. *Cruksbanksia* is a curious annual, with one of the lobes of the calyx enlarged into a round, yellow plate, as happens in *Mussaenda*. *Frankenia campestris*, with lilac flowers, may be compared to some sort of thyme.

In addition to these, is *Crinodendron Patagua*, a shrub, 6 to 8 feet high, from Chiloe and Patagonia, probably requiring a greenhouse. We can hardly form an opinion of the horticultural value of this plant. All we can say is, that, in a dried state, it is a fine looking thing, with drooping, bell-shaped flowers, an inch long, and of some deep-red or reddish color. It certainly promises well.

These indications are, we confess, of a very slight texture; but they will suffice as a guide to purchasers, which is all that they are intended for.—(*Gard. Chron.*)

NEW HYBRID IPOMÆA (*I. Kilhami*).—A few weeks ago, W. Kilham, Esq., of Boston, exhibited at the Hall of the Mass. Hort. Society, a new and very splendid *Ipomæa*, resembling the *I. Quamoclit*, (Cypress Vine,) but with flowers one half larger, and of the most dazzling vermilion scarlet. It was so beautiful that it was awarded a premium, and named by the Flower Committee, *Ipomæa Kilhami*. We were just about writing a description of it, when the following met our eye, which is so accurate an account of it, that we concluded to copy it, merely remarking, that the production of two hybrids, precisely alike, just at the same time, and in the extremest portions of the country, is a singular coincidence. The Cypress Vine is one of our most common summer twining plants, and has, probably, been grown with the Morning Glory, thousands of times; yet we are not aware of the production of a hybrid between them, bearing any resemblance to that now under notice.

"E. B. Bishop, Esq., of our city, has just shown us the leaves and the flowers of a vine, partaking of the nature of the Cypress and the Morning Glory. A year ago, the seed of the Morning Glory and Cypress were planted together, so as to entwine each other. This year, three vines came up, and produced, each, a different leaf and flower; the Morning Glory has a natural shaped leaf, with a deep orange-colored flower, small, and round shaped; the Cypress producing leaves and flowers perfectly natural; and the amalgamation producing leaves as large as the Morning Glory, with half their size divided out in small spangles, like the Cypress, producing a flower of beautiful vermilion red, and half-way between the other two in size."—(*Van Buren (Ark.) Intelligencer*.)

Mr. Kilham has not yet been able to procure any seeds, and, probably, it can only be perpetuated by cuttings.—*Ed.*

IPOMÆA FICIFOLIA.—This beautiful species, though not very new, is more ornamental, when turned out into the border, than the *I. Léarii*, as the foliage is smaller, and the flowers, which are produced in greater profusion, show to better advantage.—*Ed.*

MISCELLANEOUS INTELLIGENCE.

ART. I. General Notices.

Cape Bulbs.—I am glad to see your correspondent "Micklewell" appear again in your pages, treating on Amaryllids. I have just now a bulb of *Cyrtanthus obliquus*, throwing up a strong flower-scape—the third specimen I have flowered in these twenty years, and I should much wish "Micklewell" to try its pollen on those *Vallotas* he mentions, particularly those grown in the cottage windows, as they are more likely to seed than those we cultivate with more care in gardens. I could send him some anthers in a letter, and if the *Vallotas* to be dusted were placed in a saucer of water as soon as the flower-scape appeared, it would assist the plants to make seeds. It would also be desirable to dust some with their own pollen, and if these did not seed nor those dusted by the pollen of *Cyrtanthus*, the question of the union of the two plants would still be left open. Dr. Herbert was long of opinion that the *Vallota* and the two evergreen *Cyrtanthi* would unite by their pollen, although in his arrangement he placed *Gastronema* between them. If "Micklewell," or any other of your readers, happen to flower *Brunsvigia Josephinæ* this autumn, I would be much obliged by a few anthers of it, cut off before they open, and folded in a packet of tissue paper to be sent in a letter, as I had lately to renew the border in which our plants of *Josephinæ* grew, and I fear this has disturbed their roots so much that they will not flower this season, although they ripened ample foliage. When these *Brunsvigias* are growing in a free border they gladly receive any amount of water and liquid manure, also from Christmas up to the beginning of May; and so do the *Hemanthi*. I want the pollen of *B. Josephinæ* to see if I can push a cross between it and the *Belladonna*,—a cross which, I believe, has not yet been effected; but Dr. Herbert obtained seeds from *Amaryllis blanda* by the pollen of *Josephinæ*, and as *A. blanda* is hardly to be met with now, I should be content with a cross from the less showy *Belladonna*. Another pollen I am most anxious to obtain is that of *Gastronema clavatum*, a little African *Amaryllis* which I could never flower, and which is often received among Cape bulbs under the name of *Amaryllis pumilio*, and is said never to produce more than two flowers on a scape, often only one. There is no question now but pollen, if carefully preserved, will retain its virtue for some years. It is more than twelve years since I stated that you might gather pollen on the Alps of Thibet, carry it home safer than seeds from the same plant, and apply it successfully at home, and I have seen no reason to alter this opinion. If Dr. Hooker or Mr. Low had sent home the pollen of those beautiful rhododendrons they met with in the east, there is no doubt but it would fertilize our hardier varieties here, and thus procure new crosses of great and general interest.—(*Gard. Chron.*, 1849, p. 468.)

Roses.—"Devonian" states that he cannot get the larger roses to blossom.

Mine were in the same predicament in the early part of the year, but having repeatedly observed on a common near me a large accumulation of sheep droppings, where animals usually take shelter in bad weather, I had some collected, mixed it with a fair proportion of water, until the manure was well dissolved. The liquid was then applied to the roots of the roses twice a week in rather strong doses, and by this means in the course of a fortnight the leaves assumed a rich, green, healthy hue, and the buds of all expanded beautifully, including *La Reine* and *Souvenir de la Malmaison*. It appeared as if the additional strength given to the plants by the liquid manure enabled them to throw off the green fly, or they ceased to give the peculiar nourishment suitable for it.—(*Id.*, 1849, p. 469.)

The Cultivation and Forcing of Strawberries in Pots.—I commence in July by laying the earliest runners in 4-inch pots, placing a stone on each runner, to prevent it from being disturbed. I water when they are dry, and as soon as the plants become well rooted I repot them, placing one plant in the centre of each pot, which is 8 inches wide. The plants are then placed in an open situation on cinder ashes, with a view to prevent worms from creeping inside the pots. If the weather be hot and dry I sprinkle the plants daily, and when established with strong roots I occasionally give them a little clear manure water. They remain in this situation till November, when they are carried into the vacant houses (if any;) if not, the pots are plunged in decayed tan, or cinder ashes, to prevent them from being broken by frost. I begin forcing in January by putting some of the plants into the early peach-house, succession pine-stove, or other houses where the temperature does not exceed 65° with artificial heat, nor fall lower than 45°. The pots are placed in pans partly filled with decayed dung, and as near the glass as is practicable. When symptoms of growth are perceptible, I fumigate two or three successive nights; for I invariably find that insects come to life at this stage of growth, and when young they are easily destroyed; but if allowed to infest the plants for weeks no after treatment will restore the plants to a healthy state, much less cause them to mature first-rate fruit. As soon as the plants have done flowering I remove the most forward of them into a higher temperature. The best situation I have found for the earliest crop is on a shelf at the back of a fruiting pine-stove. I have grown them on a similar place in an early vinery, but I do not approve of either situation, because I cannot have a suitable temperature,—an essential point in forcing strawberries. With respect to giving air, I prefer a constant supply both night and day, if the houses are so constructed that they warm it a little before it comes in contact with the plants. I can say little about soil; for I have hitherto not been able to procure much else than common garden mould. The varieties I force are Keens's Seedling and British Queen.—(*Id.* 1849, p. 469.)

Garden Gossip.—I know nothing of the capability of enduring the cold of winter possessed by *Habrothamnus fasciculatus*, as my plant is growing against the back of my conservatory, where it flowers tolerably well, but certainly not in the manner of the plant figured in one of the last numbers of the Transactions of the Horticultural Society. *Habrothamnus elegans*

succeeds well with me against a south wall, where it flowers freely, and though inferior to *H. fasciculatus*, its foliage and habit are both better. Beside it, on the same wall, *Jocroma tubulosa* is ten feet high, and coming into abundant bloom; its foliage and habit are, however, weedy, and detract from its value, though its porcelain blue flowers are very interesting. Can any cultivator give me hints respecting the management of *Brugmansia sanguinea*, against a conservative wall? I planted one in consequence of Mr. Paxton's encomiums on that at Chatsworth, but hitherto without any success; as, though it has grown immensely, and fills the recess allotted to it, its appearance is that of a rank gigantic weed, bearing few flowers, and those of an unusually dull hue; would root pruning check its luxuriance, and cause it to bloom freely? [You have got the wrong plant.] Would that beautiful fancy *Geranium Unique* succeed against a wall, and attain a height of eight or nine feet, if protected in winter? [No doubt.] I am glad that a discussion on the merits of *Plumbago Larpentæ* has commenced, and I hope all cultivators will record their experience of its merits. Only two days ago I was informed by a respectable nurseryman that a bed of it was likely to succeed admirably in the garden of a noble lady in the east of this county; there, however, every plant succeeds that is capable of cultivation. If a plant in the nursery of Messrs. Knight and Perry produced at one time more than 4,000 flowers, it must be valuable. Has *Taccaonia manicata* yet been figured? [No.].—(*Id.*, 1849, p. 470.)

Lagerstræmia indica.—This very beautiful stove plant is so seldom seen in perfection that I am induced to send an account of one we now have in bloom. It stands about nine feet high, measures about six feet through the centre, and has about 150 spikes of delicate purplish-lilac flowers fully expanded; some of the spikes are nine inches to one foot long, and as they hang in graceful semi-pendulous carelessness, they present an aggregate of beauty seldom witnessed. *Lagerstræmia indica* is a free bloomer, under judicious treatment. I have bloomed plants of about eighteen inches high, but they should be three or four years old. They require to be wintered in a cool house, and started in a plant stove early in spring, after pruning them in hard, reducing the old ball, and potting them in a mixture of sandy loam and well rotted dung or leaf-mould. When in bloom they may be removed to the conservatory, and will last a month. A little manure-water will assist them very much after they show flower.—(*Id.*, 1849, p. 501.)

On the Cultivation of Hardy Bulbs.—So far as my opportunities have enabled me to judge, I believe there are comparatively few places in England where this beautiful tribe of plants are extensively or well grown. With the exception of the late Dean of Manchester, who was distinguished as a botanist for his knowledge of *Amaryllidæ* in general, as well as for his success as an amateur grower of a vast collection, there are none who have given bulbs that attention which they deserve, and which has been freely lavished on other families of plants, if not of less merit as objects of scientific study, certainly of less beauty and elegance of form. I have therefore much pleasure in laying before your readers a few observations

on the cultivation of such sorts as may be grown in the open ground ; and beg to assure them that those which I shall enumerate are well worthy of a place in every garden, and will amply repay the care that may be bestowed on them. If they are not grown extensively, they should be placed in the border in front of a greenhouse, where a limited number will produce the best effect ; perhaps 500 or 600 plants might be conveniently grouped together. The finest hardy bulbs are, without doubt, the *Alstroemerias* from Chili, the *Ixias*, the *Sparaxis*, with the different species and varieties of *Gladiolus*. In regard to the best way of managing the three first I should say, choose a border in front of any house in your garden with a warm exposure ; empty this border two feet deep, and put more than a foot and a half of good drainage at the bottom. The soil should be a mixture, such as the following:—Two fifths old peat, one fifth well decayed dung or leaf-mould, one fifth loam, and one part common sand ; mix this well, and fill up the border with it till about six inches of the top, in order to leave room for placing the bulbs in, as they will require to be covered five or six inches. In planting the *Alstroemerias* it will be desirable to keep them one foot apart. The *Ixias* and *Sparaxis* may be planted closer. If your border is about four or five feet wide, the bulbs will be most effectively placed as follows:—Place three rows of *Ixias* close to the wall, two or three rows of *Alstroemerias* in the middle, and the *Sparaxis* may be placed in front. Placed in this way they will form a neat arrangement, according to the size they attain. The proper time of doing this is about the middle of October, and the only thing to be observed after that is to prevent them from getting too wet. As soon as frosty or rainy weather sets in, they should be covered, by laying on some straw, and then some oiled canvass ; or they may be provided with lights, supported on temporary frames, and these may be covered. Where lights can be spared they are preferable, as they keep off the rain without obscuring the light. In March the bulbs will begin to show their shoots, and while the weather is not too wet the lights may be taken away during the day time, and altogether removed in April or beginning of May. When the weather becomes dry they will require to be watered frequently, and if proper care has been bestowed on them they will be in flower in June, continuing to flower, if the weather is favorable, till the end of August. After flowering they should again be kept somewhat dry, without, at the same time, being deprived altogether of water, should there be no gentle showers, during the time they are ripening their seeds. By the end of September the bulbs should be taken out and kept clean and dry on a shelf in an airy part of a greenhouse, and where they will be out of the direct rays of the sun. *Gladiolus floribundus* and *gandavensis* are the two best in respect of their flowers and their hardy character. *G. gandavensis*, especially, is a very fine hybrid between *G. cardinalis* and *G. psittacinus* ; it is, in every respect, far better than its parents. The best way to treat it is to prepare a small bed in the flower garden with rich sandy soil. Take about a dozen or fifteen strong bulbs, and put them in by themselves, about six or seven inches deep. This may be done in the middle of October ; they do not require any cover over them

during the winter time. In spring, when they begin to grow, water must be given to them very frequently. The flowers will be seen in May or beginning of June. *G. psittacinus*, *cardinalis*, and *bizarrhinus* require the same treatment. The bulbs must be taken out, after their stems and leaves get yellow, and they must be kept clean and dry in an airy place till they are planted again. They propagate themselves by forming a great many young bulbs during the summer. The following sorts are very desirable, but they are not so hardy as the *gladioli*, and most of them require to be managed like the *Alstroemerias*:—*Calochortus splendens*, *venustus*, and *luteus*; *Camassia esculenta*, *Chlidanthus fragrans*, *Phycella cornusca*, *Vieusseuxia glaucopsis*, and *Bessera miniata*.—(*Gard. Jour.*, 1849, p. 516.)

On keeping up a Succession of Flowers.—To keep up a succession of flowers as long as possible is one of the chief objects of a flower-gardener. A *parterre* without blossoms is like an orchard without fruit; every expedient is therefore had recourse to for the purpose of retarding the flowering of some kinds, and expediting that of others. Our early spring flowers, which are chiefly bulbs and tubers, would be inclined to flower again in the autumn if they were not checked by the great heat of the summer in those countries of which they are natives; or if, in imitation thereof, the careful florist did not remove them out of the bed in which they have already flowered. Thus, by stopping their growth and keeping them in a colder and moister climate than their own, we keep them from blooming till the season when their blossoms are most welcome to us. In this way many of these bulbous and tuberous-rooted plants can be flowered almost at any season; but there are rules of propriety in the execution of these proceedings; a snowdrop would scarcely be regarded at midsummer, while surrounded by so many gaudier beauties; neither would the tulip—the bright queen of the garden—look well amid the sober tints of autumn. Nature intends that her beauties shall be dispersed over the whole circle of the year, and the florist assists in this arrangement, and for this assistance claims for himself the privilege that she shall be, to a limited extent, subservient to him in some instances while he encroaches upon her seasonal laws. The British florist has a peculiar claim to this privilege, because he has taken under his care the floral beauties of every clime in both hemispheres—affording to each, as near as can be, its natural temperature, its natural soil, and its natural rank and station among others. If, then, he should occasionally interfere with nature's laws in bringing forth flowers out of season, he is not only excusable as their cultivator, but it is creditable to him as their guardian. To have them always in beauty would diminish rather than advance them in our estimation; but the recurrence of a flower when not expected—and especially if obtained without any derangement or mutilation of the plant operated upon—would be a delectable rarity, and really a desirable incident in the flower garden. Every one knows that transplanting rose trees late, or pruning them late in the spring, procures a late bloom—three weeks or a month later than the usual time of flowering. I am speaking of the common Provence rose, though this treatment of rose trees is less necessary now than it was before the introduction of so many

French and Chinese varieties, some of which are always in flower during the summer and autumn months. The laburnum is a highly ornamental plant from the latter end of May to the middle of June; if the flowering shoots be cut back, and the tree divested of its racemes of pods, it will again bloom nicely later in the summer; indeed the whole of the *Cytisuses* may be made to flower twice in the summer, by careful cutting back after the first flowers fade. The rose, acacia, and several others of its congeners, will flower a second time; and so will the *Althea frutex*, presenting its second flowers as late as October, when flowers of any kind are much wanted. Checking the growth of herbaceous border-flowers, by transplanting, or by divesting them of a few of their stems, to delay the flowering, or only allow it to be developed gradually, is an old expedient; and with attention paid to this management of perennials and biennials, and to the different times at which annual flowers may be sown, a continued display of flowers may be kept through the growing season.—(*Id.*, 1849, p. 387.)

Josling's St. Alban's Grape.—I find myself mentioned in your paper as being a fortunate man in realizing a sum far beyond what is correct for this grape. I have no objection to be considered fortunate, but I would be sorry should it be understood that I obtained money by unjust means. I will briefly state that the *St. Alban's* grape is really and truly a seedling raised by myself, and that I used every means of showing it to persons best able to judge of its merits. Fruit was sent for opinion to the editor of the *Gardeners' Chronicle*, two seasons to the Horticultural Society's Rooms in Regent Street, to the editor of the *Gardeners' Journal*, and to Messrs. Henderson, Pine Apple Place, by all of whom it was pronounced to be "excellent and distinct." The fruit in every case is free from cracked berries, as was also that submitted for opinion to Mr. Thompson.—*R. Josling, St. Alban's.* I regret that I cannot at present give a satisfactory answer to the numerous inquiries which have been made respecting this variety; and I should, therefore, have preferred remaining silent on the subject till the facts of the case be fairly made out. The remarks, however, of your correspondent "*Vitis*," render it necessary that I should now inform him, and others, that I have been for some time employing means for eliciting the truth, and that in the midst of conflicting opinions, I must be excused for being slow to condemn that which I did not rashly praise. Under the circumstances, I certainly did not over-praise the variety in question. A grape was sent to the Horticultural Society by Mr. Josling, and positively affirmed by him to be a seedling. I described it solely in regard to the intrinsic merit which I found the fruit possessed; and, considered in this view, I flatter myself that all good judges will readily agree that I did it no more than justice; for I question much whether, in point of flavor, the variety is exceeded, or even equalled, by any grape in existence. In this respect, at least, I have not to regret, with "*Vitis*," that too good an opinion was given of it; for, until a better flavored grape can be pointed out, too much cannot be said of the one that stands preëminent. If it should, however, turn out to be not distinguishable from the *Chasselas Musqué*, and if with all the goodness of the latter

it should also combine its faults, that I should regret as much as any one. There were certainly no cracked berries in the bunches which came under my notice from Mr. Josling ; and they had much longer, and also stronger shoulders than the Chasselas Musqué usually has, or even than I had observed it to possess under Mr. Wilmot's superior cultivation. The leaves sent for description appeared to me different from those of the Chasselas Musqué. Aware that different modes of cultivation and other circumstances have so great an effect in altering the appearance of varieties, that even those acquainted with them will sometimes be deceived, I thought it advisable to obtain, for the satisfaction of the public, the most direct proof of the origin of the grape in question that I possibly could ; and I accordingly addressed to Mr. Josling a series of questions, distinctly numbered, to which I requested the favor of a reply. The time when the variety was raised, and its parentage, were made prominent questions. To all inquiries as satisfactory answers were returned as could possibly be expected ; they may be seen by referring to the notice of the grape in the " Journal of the Horticultural Society," vol. i., p. 296. I need only add, that I feel obliged to " Vitis," and other correspondents, for endeavoring to clear up the matter ; and we must recollect that great similarity is no decided proof of identity.—(*Gard. Chron.*, 1849, p. 485.)

The Chrysanthemum in China.—The Chrysanthemum is the Chinese gardener's favorite flower. There is no other with which he takes so much pains, or which he cultivates so well. His camellias, azaleas, and roses, are well grown and well bloomed, but with all these we beat him in England ; in the cultivation of the Chrysanthemum, however, he stands unrivalled. The plants themselves seem, as it were, to meet him half way and grow just as he pleases ; sometimes I met with them trained in the form of animals, such as horses and deer, and at other times they were made to resemble the pagodas, so common in the country. Whether they were trained into these fanciful forms, or merely grown as simple bushes, they were always in high health, full of fresh green leaves, and never failed to bloom most profusely in the autumn and winter.

The method of cultivating the Chrysanthemum in China is as follows :—Cuttings are struck every year from the young shoots, in the same manner as we do in England. When they are rooted they are potted off at once into the pots in which they are to grow and bloom ; that is, they are grown upon what would be called by our gardeners " the one shift system."

The soil used in potting is of a very rich description. About Canton it is generally obtained, in the first instance, from the bottom of lakes or ponds, where the Nelumbium or Water Lily grows. It is then laid up to dry and pulverise for some months, when it is mixed with old night-soil taken from the manure tanks found in every garden. A heap of this kind, after being laid up for some time and frequently turned over, is in a fit state for potting the Chrysanthemum. Manure water, taken also from the tanks already noticed, is liberally supplied during the growing season, and its effects are visible in the luxuriant dark green leaves which cover the plants.

In forming the plants into nice compact bushes, which, (with due defer-

ence to Chinese taste,) I think much prettier than animals and "seven storied pagodas," their system is as follows :—The plants are trained each with a single stem ; this is forced to send out numerous laterals near its base, and these are tied down in a neat and regular manner with strings of silk thread. By having the plants clothed with branches in this way, and by keeping the leaves in a green and healthy state, the specimens never have that bare and broom-headed appearance which they often present in England when they are taken into the greenhouse in winter.

About Shanghai and Ningpo the Chrysanthemum is still better managed than it is near Canton ; but the success which attends it may also be attributed, partly at least, to the more favorable nature of the climate, the plant being indigenous to the central or more northern parts of the empire. The system of cultivation is nearly the same ; the main points attended to being those which have been noticed, namely, choosing a rich soil, planting at once into large pots, training to a single stem, and inducing it to send out numerous laterals, and giving liberal supplies of manure water during the growing season. The Chinese are fond of having very large blooms, and, in order to obtain these, they generally pick off all the small flower-buds.

In China, as in England, the Chrysanthemum flowers during the winter months. When in bloom it is in great request among the people, and is used in the decoration of court-yards, halls, and temples. It is everybody's plant, and blooms alike in the garden of the lowly Chinese cottager as in that of the blue-buttoned mandarin.

Although we are indebted to China for the parents of those varieties of Chrysanthemums which now enliven our gardens during the dull months of winter, yet, strange to say, the progeny is more numerous in Europe than in China itself. Some of those beautiful kinds raised by Mr. Salter in France would be much admired even by the Chinese florist. It is a curious fact, however, that many of those kinds, such as *formosum* and *lucidum*, which were originally raised from seed in Europe, are also met with in the north of China.—(*Gard. Chron.*, 1849, p. 484.)

Pteroma elegans.—A plant of this beautiful species being now in bloom in my conservatory, I cannot refrain from recommending it to my fellow horticulturists who may not possess it. It is well figured in "Paxton's Magazine of Botany," for March, 1848, but it is there stated to be a stove plant. This is a mistake, as it will thrive in a greenhouse, where frost is excluded, being a native of an elevated part of the Organ Mountains, Brazil. That it is capable of being cultivated as a specimen plant of extraordinary beauty, a visit to the gardens of Messrs. Veitch, the fortunate importers of it, will testify, for there may be seen a huge bush, which is literally a mass of flowers.—(*Gard. Jour.*, 1849, p. 502.)

Use of Charcoal in the Cultivation of Plants, and as a Drainage for Pots.—Under the head of "On the Conditions Essential to the most perfect Cultivation," which appeared in a late number, I fully accord with "G," that "nothing will compensate for good drainage in pot cultivation ;" but it appears to me, from the various practical results that I have been enabled to

arrive at, in the course of my experiments relative thereto, that an infinitely more efficacious "protecting material" than moss will be obtained by the substitution of charcoal for the purpose, independently of the other advantageous properties that it possesses. I admit that, as "G" avers, moss is "an excellent filtering agent," so long as it remains in a fit state to act as such; and, moreover, while its absorbing capabilities last, it proves exceedingly beneficial in the way of supplying moisture to the roots of the plant on occasions where, but for its presence in the pot, all humidity might become evaporated, besides acting in some measure as a manure; but, where the plant was not removed for some length of time, I seldom found it to be an efficient material for drainage, because, in that case, when the moss had not yielded to entire decomposition, which frequently occurred, it became so compressed by the roots of the plants, and thereby so impervious to water, as almost wholly to prevent its escape through the pot. Another objection that I have experienced to the use of moss in pot cultivation is, that it affords a most inviting harbor for worms, slugs, woodlice, and other destructive vermin; and therefore, I consider, that let its other advantages be ever so great, these cannot counterbalance the injurious effects attending this evil. I have lost many valuable plants through it, and in consequence I now discontinue the application. Now, with respect to charcoal, whether it be wood, peat, or animal, I think that its value, either in agricultural or floricultural application, is not nearly so well known, nor so much appreciated, as it ought to be; that from wood I have long used with the greatest advantage, both in the drainage of pots and as an absorbent in the preparation of manure. For the former it is well suited, when placed over the hole in pieces large enough to prevent their falling through, and to the height of about a fourth of the pot, in the same manner as potsherds are employed. Owing to its highly antiseptic qualities, it will continue for several years in an undecayed state, and consequently afford an efficient drainage for a much longer period than moss, while it is calculated not only to act in like manner as a conveyor of moisture to the plant, but will also tend greatly, from its powers of imbibing and gradually giving out any ammonia with which it comes in contact, and other fertilising alkalies or gases that may exist in the soil, to produce a more healthy growth in the plant. "The peculiar property of charcoal," says Mr. Squarey, in his "Treatise on Agricultural Chemistry," "and the only one that makes it useful in connection with the subject of manures, is its powers of absorbing various gases in the pores of its structure, and subsequently yielding them to moisture. It is proved beyond all doubt, that pure, fresh-burnt charcoal possesses the power of absorbing 90 times its volume of ammoniacal gas, and 35 times its volume of carbonic acid gas." And he further states: "If any manure has been applied, containing ammonia in its free state, that is liable to pass off in a gaseous form, the charcoal will absorb it as it rises, and retain it until the first rain, when the gas will be dissolved by the water and carried into the soil, there to be applied for the assimilation of plants, and the removal of the gas by the rain from the charcoal, restores its original powers of absorbing gas; so that this substance, when applied to the

soil, acts as a constant reservoir for these valuable gaseous substances, a property which neither time nor any circumstances can alter. Even when, in the course of cultivation, the charcoal originally applied on the surface of the land, is ploughed under the surface, even there it does not lose its power of absorbing the gases, but carries on its operations with undiminished energy." Professor Johnston, in his valuable work on the "Elements of Agricultural Chemistry," strongly recommends the mixing of charcoal, particularly animal charcoal, with liquid manure and other rich applications to the soil, but apprehends that the cost and scarcity of this substance may preclude its being brought into general use. On all occasions, however, where it has been tried, I believe that, without any exception, the results have been found so satisfactory, both as regards quantity and quality, in the produce of the crop, that they have fully compensated for the additional outlay. I understand that several manufactories have been established throughout the kingdom, for supplying this manure in a prepared and profitable state; but so many frauds have been detected in the composition, that purchasers ought scrupulously to be on their guard, and, if possible, have the commodity analyzed previous to their applying it to the land. This remark is also applicable to every other manure; and as an analysis, sufficient for the purpose, can now be obtained for a mere trifle, from parties appointed expressly by the leading agricultural societies throughout the country, there can be no excuse for its omission. A very excellent carbonised manure (from my having seen an advertisement of it repeatedly in your journal,) has recently been tried by me in various experiments, on a small scale, in an agricultural as well as floricultural way, and in most instances, with good success. What are the exact proportions of its component parts, I cannot say; but, from a rough analysis that I have had taken, it appears to be very rich in phosphates, as well as to contain a considerable share of the sulphates of ammonia, soda, magnesia, and potash, in conjunction with other highly fertilising ingredients. I am told that, in what is prepared for flowers, the fecal matter employed is sheep's dung; be it, however, what it may, I found an astonishing effect produced from an application of it to my roses, which not only grew and blossomed more luxuriantly, but were wholly exempt from aphids or other insects.—(*Gard. Chron.*, 1849, p. 485.)

ART. II. Domestic Notices.

New York State Fair, at Syracuse.—The State Fair was held at Syracuse, on Tuesday, Wednesday, and Thursday, the 11th, 12th, and 13th of September. An immense assemblage of people, from all parts of the state and country, filled the city, it having been estimated that at least 100,000 persons were present during the three days. The show was highly creditable to the society.

The horticultural department was very well got up. A large tent was set apart for the fruits, flowers, and vegetables, and this was well filled. Notwithstanding the limited crop of fruit in all parts of the state, there was a good show of pears, and a great variety of plums. The Buffalo cultivators came in for the largest share of the prizes. The finest pears were from Mr. Moore, of Cayuga Bridge, who had some really splendid fruit. Mr. Langworthy, of Rochester, had a fine basket of Swan's Orange, and some fine peaches. Mr. Denniston, of Albany, sent a great variety of plums, including many seedlings. Ellwanger & Barry had the Reine Claude de Bavay, &c.

The flowers, owing to the dry summer, were not so numerous as in former years; but the display was very good. Ellwanger & Barry sent a fine collection of Coniferae, in pots.—*Ed.*

NORTH AMERICAN POMOLOGICAL CONVENTION.—*Second Session at Syracuse, N. Y.*—The second meeting of this convention was held at Syracuse on Friday, the 14th of September, and was attended by more than eighty delegates from various parts of the Union and the Canadas.

The meeting was called to order by Mr. Dougall, of Canada West, who nominated Col. Benjamin Hodge, of Buffalo, as chairman. On motion of Dr. Herman Wendell, Mr. M. B. Bateham, of Ohio, was appointed secretary, *pro tem.* The call for the convention was then read by the secretary, and a committee of five appointed to nominate permanent officers.

The committee consisted of the following gentlemen:—N. Goodsell, F. R. Elliott, C. Downing, A. Bryant, and J. W. P. Allen.

A motion was then made, that all gentlemen present who took an interest in the cultivation of fruit be invited to sit as members of the convention.

The committee on nomination reported the following gentlemen as permanent officers:—

President.—Dr. J. A. Kinnicut, of Illinois.

Vice Presidents.—James Dougall, of Canada West; Dr. H. Wendell, Albany, N. Y.; C. M. Hovey, Boston, Mass.; M. B. Bateham, Columbus, Ohio; H. P. Byram, Louisville, Ky.; Prof. J. J. Mapes, New Jersey.

Secretaries.—F. R. Elliot, Cleaveland, O.; B. Hodge, Buffalo, N. Y.

The president, on taking the chair, thanked the convention for the honor of placing him in the chair, and believed it a compliment to the West, rather than himself.

The secretary then proceeded to call a list of the delegates to the convention.

The committee on organization then presented a report, containing rules and regulations for the organization of the convention. The report was accepted, and committees appointed by the president in accordance with the same.

P. Barry, Rochester, S. B. Parsons, Flushing, and C. Downing, Newburgh, were the committee to select and bring up fruits for discussion.

N. Goodsell, C. M. Hovey, and James Dougall, were a committee to examine the lists of fruits, presented by the members, and correct the synonyms.

Reports from the various state committees were then called for by the president, and those handed in were placed in the hands of the secretary for publication.

The convention then proceeded to discuss the merits of the fruits brought forward by the committee, and occupied the time till two o'clock, when it adjourned till three.

At three o'clock the president occupied the chair.

Dr. Herman Wendell, of Albany, offered a preamble and resolution in reference to the consolidation of the two conventions, so that but one meeting might be had in a year, which was adopted. The President appointed a committee for the purpose of conferring with the other society. The following is the preamble and resolution:—

Whereas, The National Pomological Convention held at Buffalo, in September of 1848, under the auspices of the N. Y. State Agricultural Society, composed of delegates from 15 States and the two Canadas, was the *first* general convention of such character ever convened in the United States, and whereas that convention unanimously resolved that hereafter an annual convention of like character should be held, under the title of the North American Pomological Convention, that the first meeting with that title, should be held in the autumn of 1849, at the place where the great Fair of the New York State Agricultural Society was to be held, and on the day succeeding the close of said Fair, therefore we consider this convention entitled by courtesy to perpetuate itself, but being aware that a convention of an analogous character was held in the city of New York, in the autumn of 1848, and that said convention organized itself into a permanent association, under the title of the American Congress of Fruit Growers, which is to assemble in said city of New York, on the second day of October next, and believing that the advancement of Pomological Science, as well as the inclination and interests of pomologists throughout this continent, will be best promoted by a merging of the two apparent conflicting associations into one general organization for future operations, therefore, be it

Resolved, by this convention, that a committee of five be designated by its president, whose duty it shall be to attend the coming session of the American Congress of Fruit Growers, and confer with the said congress, or a committee whom they may select, in relation to the meeting of the two associations, and, as far as this convention is interested, the settling of questions of priority of organization, places of next meeting, and title of association, shall be left to the committees whom the two organizations may appoint, and that we will exert ourselves to induce a general attendance of those interested, wherever the joint committee determine the next convention shall be held; but we cannot omit giving it as our opinion, that the cause of Pomological Science will be most promoted, and the feelings of the great mass of pomologists best satisfied, if the next meeting should be held at Cincinnati, or some other western city.

The president then named Dr. Herman Wendell, Prof. James J. Mapes,

F. R. Elliot, Charles Downing, and Dr. J. A. Kinnicut, as the committee of conference.

The discussion of fruits was then resumed. The secretary stated, that the proceedings of the convention would make a pamphlet of nearly *one hundred pages*, and that a liberal sum would be required to meet the expense of the same; and, upon the probable amount being stated, the delegates present liberally subscribed that sum.

It was voted, that the proceedings should be published under the superintendence of the secretaries, and the president and vice-presidents, and be forwarded to every delegate, and to every Horticultural Society of the country.

Thanks were then voted to the president, and other officers of the convention, when the meeting adjourned. The session was brief, but very interesting, and the display of fruit excellent for so unpropitious a year.—*Ed.*

ART. III. *Massachusetts Horticultural Society.*

Saturday, Sept. 1, 1849.—An adjourned meeting of the Society was held to-day,—the President in the chair.

The delegation appointed last season, with the addition of three members to be appointed by the chair, were appointed a delegation to attend the meeting of the Congress of Fruit Growers, to be holden at the city of New York, Oct. 2d, and Messrs. C. M. Hovey, Eben Wight, and Wm. R. Austin were appointed to complete the delegation.

A delegation consisting of five members, with power to fill vacancies, was appointed by the chair, to attend the annual exhibitions of the Pennsylvania Horticultural Society and the West Chester County Horticultural Society, and Messrs. M. P. Wilder, B. V. French, Cheever Newhall, Wm. R. Austin, and Joseph Breck were appointed that delegation.

The President, and four other members, were appointed a delegation to attend the annual fair of the American Institute, and C. M. Hovey, Wm. B. Kingsbury, E. Wight, and Wm. R. Austin were appointed delegates.

The following members were elected:—Augustus Parker, Roxbury; Levi Whitcomb, Boston; Dr. M. P. Hanson, South Reading; Joseph F. Hovey, Charlestown.

Adjourned one week to Sept. 8th.

Exhibited.—**FLOWERS:** From the President of the Society, several seedling phloxes, some of them very fine. From Hovey & Co., a collection of beautiful dahlias, among which were Mont Blanc, a fine white, Roi de Pontelles, Mrs. Hovey, Miss Vyse, Pauline Rosenfeld, &c. Dahlias, cut flowers, bouquets, &c. from J. Breck & Co., J. Nugent, W. Kenrick, A. Bowditch, Messrs. Winship, J. Hovey, T. Needham, J. Quant, Miss Russell, G. Bowditch, and others.

GRATUITIES AWARDED.

CUT FLOWERS.—To J. Nugent, John Quant, Breck & Co. and T. Needham, \$1 each.

BOUQUETS, &c.—To Messrs. Winship, A. Bowditch, and J. Hovey, \$1 each.

BASKET OF FLOWERS.—To Miss Russell, \$1.

FRUIT: From O. Johnson, five kinds of plums, including some fine specimens of the Green Gage; also, Rostiezer, Williams's Bon Chrétien and Vallee Franche pears, and figs. From Hovey & Co., six kinds of grapes. From T. Needham, five kinds of grapes. From A. Bowditch, Black Ham-burgh grapes. From H. W. S. Cleaveland, Burlington, N. J., Mountain Sprout melon. From W. C. Strong, nine kinds of grapes, nectarines and plums. From H. Vandine, eight varieties of plums. From J. Washburn, Watson, Muscadine, and five other kinds of pears. From Jacob Deane, a large collection of apples, several of them seedlings, above twenty kinds in all; among the number, the Spice Sweet, Williams, Sops of Wine, &c.

The committee tasted the Watson pear, and found it to possess a fine "bergamotte flavor."

Sept. 8th.—An adjourned meeting of the Society was held to-day,—the President in the chair.

The Vice Presidents of the Society were appointed a committee of reception to wait upon such delegates as may be present at the Annual Exhibition.

Adjourned one week to Sept. 15th.

Exhibited.—**FLOWERS:** The premiums on asters were awarded to-day, and there was a fine display of these showy autumnal flowers from the individuals who took the prizes, as well as other cultivators. There was also a fine exhibition of dahlias. Mr. Carter had some very fine seedling phloxes.

Dahlias, asters, cut flowers, &c. from M. P. Wilder, J. G. Swan, Breck & Co., J. Nugent, A. Bowditch, P. Barnes, W. Kenrick, Miss Barnes, L. Spear, Messrs. Winship, L. Davenport, D. Pierce, E. Burns, J. Hovey, J. Quant, W. Carter, A. Bowditch, Hovey & Co., J. A. Kenrick, W. Kilham, and others.

PREMIUMS AND GRATUITIES AWARDED.

GERMAN ASTERS.—To Hovey & Co., for the best display, \$4.

To Jas. Nugent, for the second, \$3.

To L. Spear, for the third best, \$2.

CUT FLOWERS, &c.—To M. P. Wilder, L. Davenport, T. Needham, P. Barnes, D. Pierce, Breck & Co., and E. Burns, \$1 each.

BOUQUETS, &c.—To Miss Barnes, Messrs. Winship, J. Nugent, A. Bowditch, J. Hovey, Miss Russell, Miss Kenrick, T. G. Swan, and John Quant, \$1 each.

VEGETABLES: From F. A. Davis, fine Lima beans, very large.

Sept. 15th.—An adjourned meeting of the Society was held to-day—the President in the chair.

It was voted, that the guests who may be present at the Annual Exhibition be entertained at the table of the committee of arrangements.

Adjourned one week to Sept. 22d.

Exhibited.—**FRUIT:** Although notice was previously given that the Hall would be closed on the Saturday previous to the Annual Exhibition, several

specimens of fruit were sent for examination by the committee. From Capt. Geo. Wilson, Imperial Gage, Manning's Long Blue, Green Gage, and Jefferson, the last fine. From Messrs. Winship, Heasel and Winship's Seedling pears. From B. Guild, Beurré Beaumont pears. From J. P. Cushing, Moyamensing and Colmar d'Arenberg, (very fine.) From A. Smith, Esq., Hartford, Summer Bon Chrétien, Dunmore, (fine,) Van Mons Leon le Clerc, (very fine,) and two other sorts. From B. F. Nourse, Bangor, McLaughlan and Penobscot plums, the former exceedingly fine. From S. Downer, Jr., Isabella grapes, and plums.

September 18th, 19th, 20th, 21st.—*The Twenty-first Annual Exhibition of the Society* was held on Tuesday, Wednesday, Thursday, and Friday, at the Society's Hall, in School street.

Owing to the severity of the last winter, and the drought of summer, it was feared that the exhibition would be greatly inferior to that of the last year. To a partial degree this was the result, but not to any thing like the extent that was anticipated. While the old exhibitors of Essex and Norfolk fell short, those of Middlesex came in for new honors, and carried off the palm with specimens superior to any ever before exhibited; and, while only a limited number of kinds was shown, the superiority of these few was apparent to all.

The flowers had been cut greatly short by the dry weather, and the dahlias had scarcely begun to bloom, and as the Autumn show depends much on this flower, the display was more meager than usual. But, if the flowers were inferior, the plants nearly made up for this defect, for some very fine specimens were exhibited, as will be seen by our report. Of ornamental decoration there was but little. The bouquets, for the Bradlee and Society's vases, were very fine, but, beyond these there was but little to attract general attention: the show was, altogether, one of intrinsic merit.

Among the fruit, the most remarkable specimens were the Swan's Orange, gathered from the same tree in Rochester, as those exhibited last year, and presented by Messrs. Hovey & Co. The Beurré Rance, and Queen of the Low Countries, by Mr. Gordon, were very remarkable. The Andrews, and Louise Bonne of Jersey, by Mr. Stickney, the Buffum, by Mr. Wilder, the Glout Morceau, by Mr. King, the St. Ghislain, by Mr. Lackay, the Chaumontelle, by Mr. Wilson, and the Seckel, by Mr. Allen, were all extra fine. Of grapes, the most remarkable was a huge bunch of Poiteau Noir, weighing about 4 lbs.; also, the Palestine, by Mr. Needham, and Black Hamburg, by Mr. Emerson. The Seedling peaches, of Messrs. Pettes and Gould, very superior, as were also the specimens of Mr. Merriam. The apples were few, and generally poor. Of new pears, but few were shown: the President and Mr. Washburn had the Josephine de Malines, and the same gentlemen and Messrs. Hovey & Co. exhibited Swan's Orange, the first which have fruited in New England.

Of vegetables the show was beyond any thing we have ever witnessed. All the specimens were fine, and the variety extensive; it was, altogether, highly creditable to this department of the Society, which they have fostered by liberal premiums.

Our report is condensed as much as possible, in order to bring it within a reasonable space. It is as follows :—

PLANTS.—From Messrs. Hovey & Co., a collection of upwards of sixty plants, embracing several new and rare kinds, among which were *Cryptomeria japonica*, 6 feet high, *Cedrus Deodara*, *Psidium Cattleianum*, (in fruit,) *Schubertia graveolens*, *Clerodendron squamatum* and *infortunatum*, 10 fine varieties of *Fuchsias*, 8 sorts of *Achimenes*, *Erica*, *Amaryllis Belladonna*, *Viburnum Tinus*, *Thuja filiformis*, India Rubber Tree, *Abelia rupestris*, &c. From M. P. Wilder, a large collection of pot plants, among which were fine specimens of *Lagerstromia indica*, *Viburnum Tinus*, *Achimenes*, var. *longiflora*, *grandiflora*, *rosea*, *Erica*, var. *Massoni*, *cruenta*, *hyemalis*, *Aster chinensis*, beautiful specimens, grown in pots. From Parker Barnes, Dorchester, fine specimens of *Achimenes Liemanii*, and *atro-sanguinea*, new. From J. W. Brown, six beautiful specimens of balsams, cultivated in pots. From A. McLennan, three beautiful coxcombs, grown in pots. From Jas. Nugent, fine coxcombs, in pots, and *Achimenes longiflora*.

DAHLIAS, ASTERS, CUT FLOWERS, &c.—From M. P. Wilder, a variety of cut flowers, among which were specimens of rare dahlias. From J. Breck & Co., fine specimens of choice dahlias; also, a great variety of cut flowers, embracing fine specimens of *Tropæolum peregrinum*, *Delphinium Breckii*, *Aster chinensis*, *Impatiens Balsamina*, and others. From P. Barnes, a great variety, embracing splendid dahlias, annuals in variety, verbenas, fine seedlings, coxcombs, *Iberis odorata*, *Calendula officinalis*, *Scabius*, in variety, *Caprifolium sempervirens*, *Lathyrus odoratus*; twenty varieties of seedling phloxes, very fine. From N. Gale, Chelsea, a large collection of cut flowers—among them were beautiful specimens of the dahlias, asters, verbenas, *Salvia coccinea*, *Cacalia coccinea*, *Lathyrus odoratus*, and coxcombs. From T. Needham, a fine display of choice dahlias. From J. Nesmith, Lowell, a very beautiful display of cut dahlias. From L. Davenport, cut flowers in great variety, consisting of the dahlia, and many others; roses, a very fine display; *Gladiolus natalensis*, *floribundus*, and *Lilium*, in variety.

From Hovey & Co., 50 varieties of dahlia, 50 of verbenas, 25 of Phlox Drummondii, German and Pyramidal Asters, in great variety; 10 new sorts of phloxes, and a great variety of cut flowers. From J. Nugent, a great variety of cut flowers, including roses, *Impatiens Balsamina*, *Aster chinensis*, dahlias, &c., all fine. From Messrs. Winship, a splendid exhibition of cut flowers, embracing verbenas, roses, and dahlias, in great variety. Cut flowers, in variety, were also shown by J. M. Moore, S. S. Hulston, South Reading, D. Pierce, J. Hovey, E. Burns, A. Bowditch, Otis Pettee, and others.

BOUQUETS, BASKETS OF FLOWERS, &c.—From Hovey & Co., two vase bouquets, two parlor bouquets, and other bouquets. From J. Nugent, two large pyramidal and two flat vase bouquets. From J. Needham, two finely arranged bouquets, in moss vases, with a fine variety of annuals and perennials, among which were very extra specimens of *Impatiens Balsamina*.

From Messrs. Winship, two large flat vase bouquets, finely arranged. From J. W. Mandell, two parlor bouquets, and two large flat bouquets, for vases, all of which were well arranged. From D. Crowley, three large pyramidal vase bouquets, very finely arranged. Fine bouquets were also sent by E. Allen, Lowell, D. Pierce, John Hovey, E. Burns, O. N. Towne, A. Bowditch, P. W. Pierce, Miss Russell, Miss Kenrick, Miss Barnes, Misses Needham, Miss Crocker, and others; bouquets of grasses, from Mrs. W. H. Richardson and I. Stickney; and bouquets of indigenous flowers, from J. G. Swan and John Quant.

PREMIUMS AND GRATUITIES AWARDED FOR FLOWERS, &c.

PLANTS, IN POTS.—For best display of not less than 20 pots, to Hovey & Co., \$12.

VASE BOUQUETS.—The best pair, suitable for the Bradlee vases, a prize of the *Bradlee Plate*, to Hovey & Co., \$10.

For second best, to Daniel Pierce, \$6.

For the best pair of bouquets, suitable for the Society's vases, to D. Crowley, \$10.

For second best, to James Nugent, \$6.

PARLOR BOUQUETS.—For the best pair, to Hovey & Co., \$8.

For second best, to J. W. Mandell, \$6.

For third best, to Edward Allen, \$5.

For fourth best, to James Nugent, \$3.

COXCUMBS.—The best 6 pots, to James Nugent, \$3.

BALSAMS.—The best 6 pots, to J. W. Brown, \$3.

GRATUITIES.—For a fine show of *Ericas*, and other pot plants, to M. P. Wilder, \$12.

For fine coxcombs, to A. McLennan, \$5.

For basket of flowers and bouquet, to Miss Russell, \$3.

For bouquets, to O. N. Towne, \$3.

For vases and bouquets, to T. Needham, \$5.

For grass bouquets, to Mrs. W. H. Richardson, \$3.

To Messrs. Hovey & Co., L. Davenport, J. Nugent, and J. Breck & Co., \$5 each, for cut flowers.

To Messrs. Winship, and A. Bowditch, for cut flowers, \$3 each.

To E. Burns, Messrs. Winship, Miss Kenrick, P. W. Pierce, J. Hovey, Miss Barnes, and L. Davenport, for bouquets, \$2 each.

To J. G. Swan and John Quant, for indigenous flowers, \$1 each.

FRUITS.—From the President of the Society, 45 varieties of pears, viz., Ananas, Beurré d'Arenberg, B. Brown, B. Diel, B. Duval, B. Golden of Bilboa, B. Goubault, Belle Heloise, Catillac, Crassane, (old,) C. Althorp, Colmar d'Ete, Columbia, Delices d'Hardenpont, Doyenné White, D. Gray, D. Doré, Duchesse d'Angouleme, Dumas, Dunmore, Eyewood, Figue, Flemish Beauty, Belle Lucrative, Fondante Van Mons, Franc Real, (Summer,) Glout Morceau, Jalousie de Fontenay Vendee, Josephine de Malines, (new,) La Fortunee, Lansac, Louise Bonne of Jersey, Marie Louise, Martin Sec, Monarch, Napoleon, Swan's Orange, Payency, Passe Colmar, Rousselet de Rheims, Vallée Franche, Van Mons Leon le Clerc, Le Curé, Long Green of Autumn.

From J. Washburn, Plymouth, 49 varieties of pears, viz., Andrews, Ananas, Williams's Bon Chrétien, Bell, Beurré d'Amalis, B. Rance, B. Diel, B. Easter, B. d'Arenberg, B. Gris d'Hiver Nouveau, Clara, Capsheaf, Comtesse de Lunay, Colmar d'Arenberg, Duchesse d'Angouleme, Doyenné Boussock, Delices d'Hardenpont, Dix, Flemish Beauty, Belle Lucrative, Fulton, Glout Morceau, Henry IV, Hericart, Jalousie de Fontenay Vendee, Josephine de Malines, Julienne, Lewis, Louise Bonne of Jersey, Muscadine, Marie Louise, Monarch, Napoleon, Passe Colmar, Pitts's Maria, Queen of Winter, Swan's Orange, Sieulle, Soldat Labourer, Seckel, St. Ghislain, Stevens's Genesee, Thompson's, Urbaniste, Le Curé, Van Mons Leon le Clerc, Washington, Black Pear of Worcester, Wilkinson; also, Orange quince, Denyer's Victoria plum.

From Hovey & Co., 42 varieties of pears, viz., Beurré d'Anjou, B. Rose, B. Diel, B. Quentin, Belle et Bonne, B. Heloise, B. Epine Dumas, Buffum, Crassane, Colmar d'Eto, Crassane Althorp, Dearborn's Seedling, Dunmore, Doyenné Musque, D. Boussock, Duc de Bordeaux, Duchesse d'Angouleme, Esperine, Excellentsissima, Forelle, Figue of Naples, Glout Morceau, Green Sugar, Henry IV, Hessel, Johannot, Jean de Witte, Jalousie de Fontenay Vendee, Knight's Monarch, Le Curé, Long Green of Autumn, Marie Louise, Napoleon, Passe Colmar, Rousselet de Meester, Swan's Orange, St. Michael Archangel, Styrian, Van Mons Leon le Clerc. Plums—Semiana, Roger's Blue. Grapes—Muscat of Alexandria, Tottenham Park Muscat, White Frontignan, Chaptal, Black Prince, Wilmot's Black Hamburgh, Black Hamburgh, Syrian, Duzetto, St. Peters. Melons—Beechwood, Christiana, Nutmeg, Persian, P. Hybrid, Valentin, Victoria.

From J. Stickney, Watertown, 41 varieties of pears, viz., Andrews, Williams's Bon Chrétien, Beurré d'Arenberg, B. Brown, B. Bosc, B. Bronze, B. Diel, B. Easter, Broom Park, Brougham, Belle et Bonne, Columbia, Colmar d'Automne, Doyenné White, D. Gray, Duchesse d'Angouleme, Dunmore, Flemish Beauty, Belle Lucrative, Glout Morceau, Gilgil, Green Sugar, Julienne, Louise Bonne of Jersey, Madotte d'Hiver, MacLaughlan, Marie Louise, Napoleon, Paradise d'Automne, Passe Colmar, Seckel, St. Germain, (Prince's,) St. G. Uvedale's, Thompson's, Urbaniste, Virgalieu, (?) Van Mons Leon le Clerc, Winter Nelis, two varieties unnamed. Apples, viz., Alexander, Baldwin, Blue Pearmain, Rhode Island Greening, Graevenstein, Hubbardston Nonsuch, Ribstone Pippin, Roxbury Russet, Spitzenberg, S. Esopus, Yellow Bellflower.

From O. Johnson, 40 varieties of pears, viz., Aston Town, Williams's Bon Chrétien, Beurré d'Angleterre, B. d'Amalis, B. Van Marum, Belle et Bonne, Bezi de la Motte, Buffum, Bleeker's Meadow, Cushing, Calebasse, Duchesse d'Angouleme, Dearborn's Seedling, Flemish Beauty, Franc Real d'Hiver, Gilgil, Henry IV, Harvard, Hericart, Johannot, Jalousie, Louise Bonne of Jersey, Long Green, Long Green of Autumn, Marquise, Napoleon, Pope's Russet, Princesse d'Orange, Passe Colmar, Rousselet Panachee, R. de Rheims, White Doyenné, St. Ghislain, Seckel, Summer Thorn, Urbaniste, Le Curé, Vallée Franche, 3 sorts unnamed. Plums—Smith's Orleans, Prince's Gage, Green Gage, Purple, (unknown.) Grapes

—White Muscat, Black Hamburg, Zinfindal, White Chasselas. Apples—Porter, Canada Reinette; also, figs, blackberries, and a fine muskmelon.

From H. H. Crapo, New Bedford, 39 varieties of pears, viz., Ananas, Williams's Bon Chrétien, Belle de Bruxelles, B. Epine Dumas, Beurré Bosc, B. Brown, B. Diel, B. Easter, B. d'Amalis, B. d'Anjou, B. Capiaumont, B. de Beaumont, Colmar d'Aremberg, Delices de Jodoigne, Doyenné Gris, D. White, D. Doré, Sieulle, Dearborn's Seedling, Dunmore, Duchesse d'Orleans, D. d'Angouleme, Roi de Wirtemberg, Flemish Beauty, Glout Morceau, Julienne, Jean de Witte, Jalousie de Fontenay Vendee, Louise Bonne of Jersey, Marie Louise, Madotte, Napoleon, Passe Colmar, Seckel, Triomphe de Louvain, Vicar of Winkfield, Verte Longue, Winter Nelis, and 4 varieties, (name unknown.) Grapes—Clinton, (open culture,) Black Hamburg, Sweet Water, White Nice, from a cold-house.

From M. P. Wilder, 33 sorts of pears, viz., Beurré Cutter, B. d'Anjou, B. Diel, B. Golden of Bilboa, B. d'Elberg, B. Easter, B. Beauchamps, B. Goubault, Belle Cra, Bezi de la Motte, Buffum, Colmar du Lot, Columbia, Conde, Colmar d'Aremberg, Doyenné Boussock, D. Blanc, D. Panachee, Sieulle, Belle Epine Dumas, Figue de Naples, Jargonelle, (French, second crop,) Girardin, (not the old sort,) Glout Morceau, Henry IV, Heathcot, Hericart, Jalousie de Fontenay Vendee, Louise Bonne of Jersey, Passe Colmar, Urbaniste, Le Curé, Verte Longue Panachee.

From J. Breck & Co., 34 varieties of pears, viz., Henry IV, Williams's Bon Chrétien, Beurré d'Amalis, B. Bronze, B. de Beauchamp, B. Chaptal, B. de Zee, B. Diel, B. Easter, Belle et Bonne, B. Heloise, Colmar Neill, C. d'Aremberg, Comtesse de Lunay, Duchesse d'Angouleme, D. of Mars, Belle Epine Dumas, Figue, Forelle, Glout Morceau, Jalousie de Fontenay Vendee, Louise de Boulogne, Louise Bonne of Jersey, White Doyenné, Liberale, Napoleon, Payency, Passe Colmar, Swan's Egg, Vaux aux Petres, Le Curé, Verte Longue, Winter Nelis, Van Mons Leon le Clerc.

From E. King, 30 varieties of pears, viz., Ananas, Williams's Bon Chrétien, Bon Chrétien d'Hiver, Belle et Bonne, Bon Chrétien (of the French,) Beurré Diel, B. Easter, B. Brown, B. Golden of Bilboa, Catillac, Calabasse Bosc, Duchesse d'Angouleme, Fortunee, Flemish Bon Chrétien, Figue de Naples, Glout Morceau, Heathcot, Long Green, Louise Bonne of Jersey, Napoleon, Passe Colmar, Poire d'Hiver, Queen of the Low Countries, Rousselet de Rheims, White Doyenné, St. Germain, Thompson's, Van Mons Leon le Clerc, Le Curé, and 4 varieties (name unknown.)

From Messrs. Winship, 24 varieties of pears, viz., Beurré Doré, B. St. Nicholas, B. Gris d'Hiver de Lucon, Bezi de Vendre, Belle Epine Dumas, De Lepene, Bergamot de Paques, Colmar d'Aremberg, Delices d'Hardenpont, Dunmore, Flemish Beauty, Fortunee, Fondante de Charneuse, F. de Malines, Hessel, Jalousie de Fontenay Vendee, Louise Bonne of Jersey, Oregon, Reine d'Hiver, Stone, Triomphe de Louvain, Wilkinson, Williams's Bon Chrétien.

From F. Burr, Hingham, 21 varieties of pears: Ananas, Bell, Williams's Bon Chrétien, Bon Chrétien, (Summer,) Golden Beurré of Bilboa, Charles of Austria, Chelmsford, Crassane, C. Althorp, Culotte de Suisse,

Flemish Beauty, Fulton, Harvard, Heathcot, Hinckley, Julienne, Pitt's Prolific, Petre, Rousselet de Rheims, Remington, Warden. Apples—Cogswell, Striped Sweet. Plums—Pedrigon.

From W. G. Rayner, Salem, pears—W. Bon Chrétien, Beurré d'Amalis, B. Diel, B. Golden of Bilboa, Dearborn's Seedling, Duchesse d'Angouleme, Louise Bonne of Jersey, Marie Louise, Napoleon, Seckel, St. Germain, Stevens's Genesee. From A. Lackey, Jr., Marblehead, pears—Andrews, Boucquia, Citron of Bohemia, Belle Lucrative, St. Ghislain, Seckel, and one unnamed variety. Plums—Corse's Field Marshal, Green Gage, Jefferson, St. Catharine, and a dish of filberts. From A. Dexter, pears—Andrews, Bussey, Seckel, Washington, W. Bon Chrétien, and one unnamed variety. Apples—Baldwin, Deacon, Sweeting. From H. Poor, Northampton, pears—Flemish Beauty, and White Doyenné. Peaches—Coolidge's Favorite, Early Crawford, Melocoton, Yellow Rarieripe. Apples—Hubbardston Nonsuch, Porter, Rhode Island Greening, also fine specimens of wheat. From S. Bigelow, by E. Burns, pears—Duchesse d'Angouleme, W. Bon Chrétien, and Flemish Beauty, also fine specimens of the Orange quince. From J. Deane, Mansfield, apples—Boxford, Boyden, Sweet Codlin, Gilliflower, Heyboy, Monstrous Pippin, N. Y. Pippin, Pumpkin Sweet, Porter, Pomwater, Red Lucrative, Russet Golden, Russet Pearmain, Orange Sweet, Seek-no-Further, Striped Sweet, Spice Sweet, Superb Sweet, Seedling Sweet, raised from seed of the Spice Sweet, Spitzenberg. From L. P. Grosvenor, Pomfret, Conn., apples—Black, Porter, Summer Pearmain. Peaches—Coolidge's Favorite, Grosse Mignonne, Royal George, Seedling, Teton de Venus.

From J. Hyde & Son, pears—W. Bon Chretien, Seckel, Watertown. Apples—Danvers Winter Sweet, Porter, Roxbury Russet, and the berries of a seedless herberry; also, several varieties of native grapes. From J. A. Hall, Raynham, apples—Baldwin, Boyden Sweet, English Pearmain, Good Sour, Honey Greening, Nonsuch, Pearmain, Pomwater, Peck's Pleasant, Roxbury Russet, Rhode Island Greening, Seek-no-Further, Tolman Sweet, Tender Sweet, Wine apple, White apple. From N. Durfee, Fall River, pears—W. Bon Chrétien, Beurré d'Amalis, B. d'Aremberg, B. Rance, Calebasse, Crassane Althorp, St. Germain, Rousselet de Rheims. From Life Baldwin, Brighton, pears—Beurré d'Amalis, Louise Bonne of Jersey, Queen of the Low Countries, Roi de Wurtemberg, Le Curé. From H. B. Crooker, by T. Needham, grapes—Black Hamburg, Black Frontignan, Black St. Peter, Cannon Hall, Muscat of Alexandria, White Frontignan, Syrian, Palestine grape, the largest bunch of this variety measured twenty-seven inches in length and was proportionally wide; also, some fine W. Bon Chrétien pears, and peaches. From W. C. Strong, grapes—Black Hamburg, Muscat of Alexandria, Black Muscat, Rose Chasselas, White, White Nice, Syrian, Black Prince, St. Peters, Frankendale; also, a few dishes of nectarines and peaches, fine, and three varieties of plums.

From J. A. Lowell, Esq., by J. Owens, grapes—Black Hamburg, Muscat of Alexandria, Reine de Nice, White Frontignan, fine specimens.

From J. M. Ives, pears—Belle Lucrative, Buffum, Bezi de Montigny, Beurré Bosc, Flemish Beauty, Glout Morceau, Golden Beurré of Bilboa, Lewis, Le Curé, Winter Nelis, Wilkinson; apples—Minister, Aunt Hannah, Swaar; plums—Red Gage, Wilkinson, Prune, Goliath, Late Yellow, Damson, Yellow, (without name;) quince—seedlings. From J. F. Allen, pears—W. Bon Chrétien, Urbaniste; grapes—Golden Chasselas, Black Hamburg, Wilmot's New Black Hamburg, White Nice, Portieu Noir, one bunch weighing four pounds and seven ounces. From A. D. Weld, pears—W. Bon Chrétien, Bon Chrétien, Chaumontel, Long Green, St. Ghislain, Marie Louise, and six varieties without name; apples—Baldwin, Black, Fall Pippin, Gordon Sweet, Nonsuch, Lady, Porter, Pumpkin Sweet, Roxbury Russet, Spitzenberg. From J. A. Kenrick, pears—Duchesse d'Angouleme, Flemish Beauty, Louise Bonne of Jersey, Seckel, Le Curé; plums—Red Gage, Smith's Orleans, Lombard, Blue Imperatrice; apples—Baldwin, Cogswell, Hubbardston Nonsuch, also the fruit of the Tree Cranberry. From J. Lovett, 2d, nine varieties of pears, viz., W. Bon Chrétien, Beurré Bosc, Columbia, Harvard, Héricart, Hessel, Marie Louise, Napoleon, St. Ghislain, Van Mons Leon le Clerc. From G. J. & A. Parker, pears—W. Bon Chrétien and Chelmsford. From J. Gammell, East Lexington, plums—Lombard, a fine branch; also Early Crawford and Seedling peaches. From J. D. W. Williams, grapes—Black Hamburg, White Frontignan, Royal Muscadine. From R. Nichols, Saco, Me., plums—Caledonia, Green Gage, Smith's Orleans.

From G. Merriam, peaches—Coolidge's Favorite, Old Mixon, Crawford's Early, George IV., Lemon Rareripe; also, Bon Chrétien and Catillac pears. From O. Pettee, Newton, (Upper Falls,) peaches—thirty varieties of seedlings, many of them very fine. From W. R. Austin, fine specimens of the Le Curé pear. From E. S. Rand, Newburyport, pears—W. Bon Chrétien and Louise Bonne of Jersey. From S. W. Cole, grapes—Strawberry, Coon, Perry's, Buckminster and two seedlings; also melons—Water and Citron—fine specimens. From G. W. Gage, Methuen, peaches—George IV., Coolidge's Favorite, Yellow Rareripe; and fine nectarines. From J. A. Gould, Newton, thirty-five fine Seedling varieties of the peach. From G. Phipps, Framingham, fine W. Bon Chrétien pears, and peaches called the Golden Purple. From S. D. Pardee, New Haven, pears—Howell's Seedling, and two other pears raised by Mr. Howell, as yet unnamed. From J. Gilmore, Newton Corner, pears—Flemish Beauty and Seckel—fine specimens. From Isaac Holden, Billerica, peaches—Early Crawford and Bosworth's Seedling.

From T. O. Jackson, Plymouth, pears—Autumn Bergamot, Bon Chrétien Summer, Dunmore, Roi de Wurtemberg, Julienne, and White Doyenné. From Peter Nostrand, Flushing, L. I., Hageman pear, found in a hedge on the farm of Andrew Hageman, North Hempstead, L. I. From L. Blodget, Boston, White Muscadine grapes, growing in a pot. From G. B. Peck, Providence, pears—Flemish Beauty and Knight's Seedling—fine specimens. From B. Guild, Esq., Brookline, fine specimens of the Beurré de Beaumont pear. From J. Prentiss, Keene, N. H., two

varieties of apple for a name. From R. T. P. Fiske, Hingham, fine specimens of the Cushing pear. From G. Pierce, West Cambridge, fine specimens of the Porter apple. From A. Nettleton, Springfield, native grapes. From G. Wilson, Marblehead, pears—Chaumontel, Louise Bonne of Jersey; plums—Green Gage, Imperial Gage, Smith's Orleans, Manning's Long Blue, all fine specimens. From Mrs. C. Hutchinson, Boston, fine specimens of Black Malaga grapes, open culture. From B. D. Emerson, Jamaica Plain, fine specimens of Black Hamburg and Sweetwater grapes. From L. Wheeler, Cambridge, Coolidge's Favorite peach, fine specimens.

From J. B. Moore, Concord, melons—Black Spanish, Long Caroline, Mountain Sweet, and one variety unknown; the named varieties were tested and proved to be of fine quality. From C. Heard, Brighton, very fine specimens of the Beurré Diel, Duchesse d'Angouleme, Napoleon, and Urbaniste pears. From Z. Hosmer, Cambridge, plums—Denyer's Victoria and Smith's Orleans. From D. O. Kellogg, Troy, New York, plums—Bleeker's Gage, Ida, Jefferson, and Washington. From Vincent Laforme, South Boston, fine Seedling peaches. From J. B. Kimball, Boston, Sweetwater grapes, open culture, very fine specimens. From H. C. Merriam, fine specimens of Crawford peach. From John Nesmith, Lowell, Early Crawford peach, fine specimens. From Q. Hersey, Hingham, melons—hybrid from Green Persian and the Christiansa, fine specimens. From D. Carter, Lowell, Seedling grapes. From A. R. Campbell, Chelsea, fine specimens of Seckel pear. From J. Howland, Esq., New Bedford, fine specimens of the Beurré Bosc pear. From J. W. Foster, Portsmouth, N. H., a dish of fine figs, open culture. From S. H. Smith, Esq., Providence, R. I., fine specimens of the Pratt pear. From Rev. A. D. Baker, Medford, peaches, fine specimens. From W. P. Niles, Boston, Black Hamburg grapes, open culture, fine specimens. From J. Bird, Watertown, beautiful specimens of the White Doyenné pear.

PREMIUMS AND GRATUITIES ON FRUITS.

PEARS.—For the best 12 varieties of 12 specimens each, the Lyman Plate, to J. Gordon, \$20.

For the 2d best, to J. Stickney, \$12.

For the 3d best, to Hovey & Co., \$8.

For the best dish of pears, 12 specimens of one variety—J. Washburn, for the Louise Bonne of Jersey, \$6.

For next best, to W. G. Rayner, for the Duchesse d'Angouleme, \$4.

APPLES.—For the best 12 varieties, 12 specimens each, to George Pierce, for the Porter, \$6.

For the next best, to J. A. Kenrick, for the Hubbardston Nonsuch, \$6.

GRAPES.—For the best 5 varieties, two bunches each, the Lyman Plate, to H. B. Crooker, \$15.

For the 2d best, the Bradlee Plate, to J. F. Allen, \$10.

For the best two varieties, two bunches each, to W. C. Strong, \$7.

For the 2d best, to Hovey & Co., \$5.

ASSORTED FRUIT.—For the best basket of fruit of various kinds, to O. Johnson, \$10.

GRATUITIES.—For fine grapes, to J. Owens, gardener to J. A. Lowell, Esq., B. D. Emerson, and L. Blodgett, \$5 each.

For a fine display of peaches, to Galen Merriam, and Otis Pettes, \$5 each.

To F. Burr, Hingham, for a collection of pears, \$8.

To G. Phipps, for W. Bon Chrétien pears; G. Wilson, Marblehead, for Chaumontelle pears; H. N. Langworthy, for Swan's Orange pears; J. Nesmith, Lowell, for Late Crawford peach; A. Lackey, Jr., Marblehead, for St. Ghislain pear; A. Dexter, Roxbury, for Andrews and Seckel pear; Henry Poor, Andover, for Flemish Beauty pear, and Porter apple; J. Breck & Co., collection of pears; L. Baldwin, Brighton, collection of fruit; H. C. Merriam, collection of peaches; M. P. Wilder, Columbia and Buffum pears; C. Hurd, collection of pears; A. D. Webber, Needham, melons; J. B. Moore, watermelons,—severally awarded the Society's silver medal, valued at \$5.

VEGETABLES: From A. D. Williams, fine cauliflowers, carrots, parsnips, salsify, tomatoes, cabbages, potatoes, in variety, squashes, fine Marrow and Canada, Sweet and Early White corn. From S. W. Cole, a large and very fine collection of potatoes, embracing forty standard and thirty-five seedling varieties. This exhibition attracted much attention; also, pumpkins, Winter Crookneck squash, Winter Blood beet, Turnip beet, Passano beet, Early Horn carrot, and Cabbage turnip. From F. A. Davis, Lima, Saba, Dwarf, White Kidney, and London Horticultural beans; Savoy, Red Dutch, and Large Scotch cabbages; fine squashes, potatoes, salsify, okra, Martynia, cranberries, (upland growth,) Turnip-rooted and Blood beets, carrots, parsnips, and Ruta Baga. From Q. Hersey, Early Frame, Early (Manley's) Egyptian, Shepard's Early, Philadelphia Red, Long Red, Seals-foot, Pink-eye, Chenango, and Early Red potatoes; also, a variety of fine specimens of corn.

From Hovey & Co., 14 varieties of corn, many of them very beautiful; also, fine Marrow squashes, Giant tomato, Apple tomato *true*, extra-fine specimens of Egg Plant (purple), Blood beets, turnips, and five varieties of potatoes, and fine specimens of Canada squash, three of the growth of 1848. From F. Alexander, Lynn, two very fine and large squashes, the largest weighing 111 lbs. From J. Bumstead, Roxbury, two fine squashes, one of which weighed 82½ pounds, the other 62 pounds. From A. E. Belknap, Boston, Yellow tomatoes, raised from seed sent from Cuba; very beautiful specimens. From H. Poor, North Andover, White Flat Winter wheat, produced 30 bushels to the acre; also, Black Sea Spring wheat, fine specimens. From J. B. Moore, Concord, Blood beet, Ruta Baga, Canada squash, Seal-foot potatoes, Darling's Early Sweet corn, ripe; not planted until the 10th of June. From J. Lovett, 2nd, several fine heads of Broccoli. From J. Stickney, carrots, fine specimens, and several fine plants of the Pomeranian cabbage. Vegetables in variety, from F. Mosely, A. McLennan, O. N. Towne, Jas. Parker, A. D. Weld, J. D. W. Williams, O. Pettes, Mrs. L. Spaulding, W. H. Whitney, J. Gammell, George Watson, G. J. and A. Parker, and others.

PREMIUMS AND GRATUITIES ON VEGETABLES.

For the best display, and greatest variety, to A. D. Williams, a prize of \$10.

For 2d best, to Franklin H. Davis, \$6.

GRATUITIES.—For a fine display of standard and seedling potatoes, to S. W. Cole, \$10.

For a good display of vegetables, to John B. Moore, \$5.

For a variety of fine vegetables, to A. D. Weld, \$5.

For a display of vegetables, to Hovey & Co., \$5.

For a variety of vegetables, to Q. Hersey, J. Stickney, and G. J. and A. Parker, \$2 each.

For fine potatoes, to William H. Whitney, \$1.

For fine specimens of Brocoli, to Josiah Lovett, 2nd, \$1.

For fine egg plants, to A. McLennan, \$1.

HORTICULTURAL MEMORANDA

FOR OCTOBER.

FRUIT DEPARTMENT.

Grape Vines, in the greenhouse, should now be divested of all their yellow leaves, and superfluous laterals which spring from the spurs: a thorough cleaning of the house should be made now, in order to have every thing in order for the plants. Vines in cold houses should be kept well aired in fine weather, if it is desired to keep the grapes in good order for some time;—keep the house dry, and avoid all unnecessary watering. Vines planted the present year will still be growing, and in order to well-ripen the wood, on which every thing depends, the house should be well aired, and shut up early on frosty nights. Vines in pots should be kept rather dry, and placed in a warm and airy place to harden the wood—prune off superfluous branches. Vines in the open air, of hardy kinds, should now be partially pruned, cutting away all laterals and shoots not wanted for bearing next year.

Strawberry beds should have attention, and, if weedy, they should be thoroughly cleaned before winter—it will save much labor in spring.

Raspberry and Blackberry plants may be transplanted now.

Currant and Gooseberry bushes may be safely removed this month.

Peach trees, in pots, should now be sparingly watered in order to ripen the wood.

Fruit trees, of all kinds, may be safely transplanted this month; it is, we think, the most favorable season, and our success has been better than with spring planting.

Budded trees should be looked after, especially peaches, which are likely to be girdled from their late growth.

Figs should remain out in the open air until there is danger of frost, as it will mature and ripen the wood.

FLOWER DEPARTMENT.

Dahlias, though now in bloom, will probably be cut off by frost before the end of the month. After the first light frost it is best to take them up; a hard frost greatly injures the roots, as the stem continues to die into the crown when it is severely frozen: take up in a dry day in dry weather, if possible.

Pelargoniums should be repotted, if not already done; use a light, sandy soil, and keep them very near the glass in order to harden the young shoots. Cuttings should now be potted off.

Camellias should now be got into the greenhouse, giving the same attention as directed last month.

White, Japan, Tiger, and other lilies, may be planted this month.

Tiger flowers, Gladioluses, and other summer flowering bulbs, not hardy, should be taken up this month.

Ixias, Sparaxis, &c., may yet be planted.

Carnations should be taken up and potted, or placed in frames where they can be slightly protected.

Roses should be yet taken up; hardy kinds may be safely transplanted now.

Dwarf Rocket Larkspur seed may be sown in beds this month for early spring blooming.

Schizanthuses should now be potted off into small pots.

Tulips and Hyacinths may be planted this month.

Sedum Sieboldii, taken up before frost and potted, will flower finely till December.

Herbaceous pæonies may now be safely transplanted.

Pansies, raised from seeds last month, may be set out in beds for early blooming. Seeds may be sown now for a succession.

Ericas, which require it, should now be repotted.

Achimenes, done blooming, should be placed away on a dry shelf.

Chrysanthemums should be removed to the greenhouse before frost.

Fuchsias, done flowering, may be partially cut down and placed under the stage, where they will keep safely till spring, giving them an occasional watering.

Begonias, of the several kinds, should be repotted and placed in a warm part of the house, where they will flower freely.

Cestrum aurantiacum may now be shifted into larger pots; it is one of the finest autumn flowering plants.

Herbaceous plants, of all kinds, may now be safely transplanted.

Petunias, of fine kinds, should now be propagated from cuttings.

Hollyhocks, in seedling beds, should now be removed to the border where they are to flower.

Epiphyllum truncatum and violaceum should now be more freely watered, and kept in the warmest part of the house.

Greenhouse plants, of all kinds, should be top-dressed, staked up, and put in good order, before removal to the house.

THE MAGAZINE OF HORTICULTURE.

NOVEMBER, 1849.

ORIGINAL COMMUNICATIONS.

ART. I. *Notes made during a Trip to London and Paris, in the Autumn of 1849.* By J. E. T.

I MADE a few notes during a hurried trip to London and Paris, this autumn, which you may publish, if you think them of sufficient interest.

Two hours and a half spent at Kew Gardens, about seven miles from London, permitted only a very cursory examination. These gardens, and the collections they contain, have been raised, by the energy and judgment of the present director, Sir W. J. Hooker, the well-known and celebrated botanist, to a high pitch of excellence. Numerous structures of glass have been adapted to every kind of plant, from the towering palms, the arborescent ferns, and the lofty acacias and pines, to the more humble growths of the tropical rocks, bogs, and plains; and the stoves have every convenience for simulating the moist atmosphere and heat required for many of the tender plants of those regions. There is also an extensive rock-work, for Alpine plants of temperate and cold climates, on which these gems seem to grow and flourish almost as well as on their native spots.

It would be impossible for me to say whether I preferred the magnificent growth of the trees in the arboretum and pleasure-ground, comprising alone 176 acres, or the fine appearance of the beautiful pines of all climates, or the palm and fern-house; but one department struck me as of singular utility, and well worthy of imitation here,—it was the collec-

tion of patches of all the grasses and various cereals, as well as that of the native plants of Great Britain, all named and numbered, and open for the use and examination of students, many of whom were there taking notes. Would there were such a collection here; the study of botany would not then be merely the dry effort of taxing the memory with a burthen of names from text-books, but would be soon invested with all the interest which really and truly appertains to it. As these gardens at Kew are open absolutely free of expense to the public, there is no difficulty in the way of students of either sex; and it is gratifying to add, that misconduct or depredations are almost unknown. I saw here the action of the machine for cutting the short grass on lawns; it performed the work expeditiously and perfectly.

The collection of exotic ferns is most extensive and beautiful, and contains the curious *Eupodium Kaulfussii* of J. Smith, separated by him from *Marattia*, on account of each indusium being stipitate, or mounted on a foot-stalk—almost the only instance known in this extensive family. The singular orchideous plant *Peristéria elata*, was also there in abundance, and in profuse bloom. This is called Flor del Espiritu Santo, in South America, because in the centre there is a perfect miniature representation of a pure-white dove, with expanded wings and yellow beak. In many of these curious orchideous plants the resemblances to animal forms require some stretch of the fancy to distinguish,—here no imagination is wanted, the resemblance is perfect and complete. There was a plant of this species in the collection of the late W. Boott; it flowered well one or two seasons, but, I believe, he lost it.

The only other collection I have room to name, is that of the New Holland plants, which, with the Proteacæ of the Cape of Good Hope, occupy a large and lofty glass structure. In this collection are also numerous young plants, raised from the seeds sent home by Mr. Drummond, from Swan River.

The varied, grotesque, and beautiful foliage here, as well as the flowers, are extremely striking, the leaves of several of the Banksias and Dryandras resembling those of *Cycas* and of ferns; others of the Cape plants resemble firs; while the beautiful, white, silky leaves of some of the *Proteas* form most singular contrasts, and give an excellent idea of a vege-

tation entirely different from any thing that meets the eye in any other part of the globe. That pest, the scaly bug, was not absent; and, although I must observe, that I have seen other conservatories at least as clean as these, yet there was nothing in them that would strike the attention of any one as bordering on neglect, unless his eye, like mine, had been made curiously critical by constant attention to the subject. I cannot leave these gardens, however, without noticing the beauty of many of the new fuchsias, particularly of the light-colored or white ones; the best among them were:—One in Ring, Napoleon, Acantha, Beauty Supreme. I do not know whether these are yet in this country.

A new seedling *Phlox Drummondii*, called var. *Leopoldii*, was also very striking; it was of the finest color, with a clear and distinct white star in the centre of each flower.

The only other garden, near London, I had time to visit, was the Zoological Gardens, Regent's Park. The collection of animals is numerous,—they are kept clean,—that of the birds, in particular, is of the greatest beauty, and in excellent feather. The chief attraction, however, to me, was the new reptile-house. I was perfectly amazed at the enormous size of the living and active pythons and boas, only divided from you by immense sized panes of plate glass, against which they were constantly striking their forked tongues, while their bright eyes seemed to invite you to make a portion of their repast; the curious motion of their skeleton frames was distinctly visible as they glided up and down the trunks of trees, placed in their compartments for that purpose. In this collection were also numerous and beautiful lizards, as well as many of the singular and beautiful tree-frog; it squats constantly on the trees, and on its back is a large patch of a most vivid-green color. Having business at Birmingham, I fortunately happened to arrive the day of the fruit and flower show at the Botanic Garden, at Edgbaston, about one and a half miles from the town.

It is impossible to praise too much the beauty and neatness of the general plantations of the garden; the trees in the pine-tum had been planted with so much judgment, and so carefully tended, that, although many were younger, their forms and outlines were more striking and more agreeable to the

eye, than those at Kew; the lawns were also in the most perfect keeping. The exhibition of flowers, under tents, although not large, was beautiful, and the specimens very well grown. *Allamanda*, *Ixora*, *Stephanotus*, Fuchsia, and many others, were in abundance; the dahlias were exceeding fine, much deeper, rounder, more swelling, than any I have seen here; indeed, the amateurs there, observed, that they had seldom been surpassed. The show of vegetables was good, not exceeding, however, what I have, of late years, seen raised here, except the autumnal crops of peas, *Scymetar* and others; these were extraordinary. It seems that the mould disease, which prevents our raising late peas, does not exist there. The apples and pears were entirely beneath remark, the best of them would not have been admitted to any exhibition here. I had, unfortunately, not time to make any inquiry whether this was from temporary causes, or whether it was usual, but can only remark, that, neither in London or Paris, have I seen any thing nearly so fine as these fruits in this country. The grapes and peaches were not uncommonly fine, but such as are usually seen in our weekly exhibitions; the nectarines, however, were excellent. The weather was beautiful; a fine band of music enlivened the scene, and as the price of admission was low, multitudes of happy faces were pouring in, when I was obliged to leave. The collection of greenhouse plants was quite respectable; for lofty specimens they had a domical conservatory, exactly resembling that formerly belonging to the Public Garden, but only about two-thirds the size—there was, however, a wing on each side—and altogether the institution appeared to do great credit to the liberality of the town of Birmingham.

On my arrival at Paris, I found time to devote an hour to the Winter Garden, in the Champs Elysees. It is an immense, lofty and extensive structure of glass, with large halls or antichambers, in which concerts or any great national fêtes, or entertainments are given. There seems not to have been any expense spared in getting it up; in the centre is a parallelogram, to imitate a lawn, formed of the beautiful vivid lycopodium, common in our greenhouses,—the effect of this is brilliant. There is an *Araucária imbricatá*, about 30 feet high, multitudes of bananas (*Musa*) in blossom, and fruit,

with most of the rare tropical plants, nearly all growing in beds, not in pots or tubs; ponds for tropical water-plants, at one end of a fountain, which plays to the top of the structure, the water falling on a small collection of rocks, and beautiful climbers all round the interior, their branches, tendrils, and flowers hanging in elegant profusion. The whole is, in fact, arranged with that peculiar taste for which the French are so eminent, and by which every thing is made, by means and calculations generally unknown, to meet the eye exactly at the proper place and time. I regret much to add, that the whole undertaking is bankrupt, and, like many other marks of civilization and enjoyment, will, probably, sink under the effects of the ill-directed and rude attempts to attain that rational liberty which can hardly ever be obtained by convulsive efforts, but must result alone from steady perseverance and the exercise of the most mature judgment.

One of my greatest regrets was, to have quitted England without having examined the Agricultural School, at Cirencester, which I understand is quite worthy of imitation.

Boston, Oct., 1849.

Such is the rapidity of communication now, not only throughout our country, but with the Eastern Continent, that our nearest friends may cross the Atlantic, see the worlds of London and Paris, and return before we know they have been absent. Such has been the case with our friend and correspondent, J. E. T. We are pleased to welcome him back, and still more pleased to record the results of his walks in the gardens around London and Paris, and only regret that he was so hurried for time as not to allow him a better opportunity to see more of the gardens and gardening of London, where he was so well acquainted, and where, for so many years, he resided, assured, as we are, that he could have afforded all our readers so much that would have been instructive as well as entertaining, in all that relates to horticulture and its kindred branches. We indulge in the hope that there are yet some things which he may have overlooked in the present communication, which will serve as a text for another article.

We would remind our correspondent, that, during his ab-

sence, three of the fuchsias he names have flowered finely in our collection, viz., Acantha, Napoleon, and Beauty Supreme—the first of which we had two years ago. *Phlox Drummondii* var. *Leopoldii* has already been recommended by us for its great beauty, (Vol. XIV, p. 311.)—*Ed.*

ART. II. *Descriptions and Engravings of Select Varieties of Plums.* By the EDITOR.

OUR last article, under this head, appeared in our last volume, (XIV, p. 149,) when we described four varieties. Last year we did not have an opportunity to secure many drawings, owing to the limited crop; but the present season, in this vicinity, the plum was the only fruit which escaped the general destruction of last winter, and our own trees, as well as others in the neighborhood, were weighed down with the profusion of fruit. This has enabled us to inspect many varieties, and to complete the descriptions and drawings of a large number, which we shall, hereafter, lay before our readers.

9. COE'S GOLDEN DROP. Hort. Soc. *Catalogue*, 3d Ed., 1842.

Coe's. *Pomological Magazine*, vol. 11, pl. 57.

Coe's Imperial,	} Hort. Soc. Cat., 3d Ed., 1842.
Golden Drop,	
New Golden Drop,	
Bury Seedling,	
Fair's Golden Drop,	
Golden Gage,	
Waterloo, of some French collections.	

Coe's Golden Drop (*fig. 42*) is one of the most delicious of all plums; resembling the Washington in size, equalling the Green Gage in the lusciousness of its juice, and coming in after both of these varieties have gone, it may be fairly ranked as one of the best kinds yet produced, and indispensable to even the very smallest collection.

Mr. Downing states, that this variety "succeeds well in

the Middle States," which would imply that it does not succeed in New England. This, however, is not the case; so far as we have any knowledge, it ripens freely, and produces abundantly, unless in the extreme Northern parts of Maine and New Hampshire, where it may not acquire that richness, owing to its late maturity, which constitutes its high character.

Coe's Golden Drop was raised from seeds, nearly forty years ago, by a gardener of the name of Coe, at Bury St. Edmunds, near London, but from the stone of what variety is not known. Its excellence, however, made it a favorite variety, and it soon became generally introduced into all choice collections of this

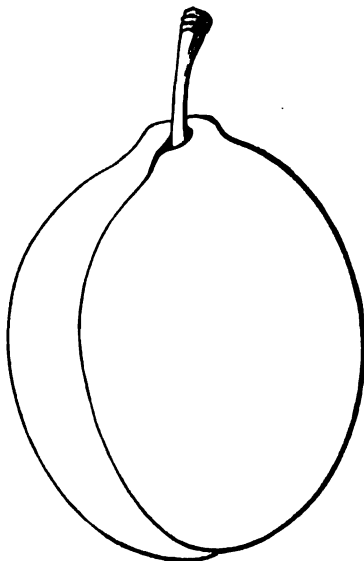


Fig. 42. Coe's Golden Drop Plum.

fruit, under the several synonymes which we have quoted above, except the last, which is of recent addition to the list; the French have disseminated it considerably under the name of Waterloo; trees, received under that name, have fruited in our collection this year, and proved to be the Golden Drop.

The tree is of a vigorous and rather compact growth, having smooth, short-jointed, purplish shoots, with prominent eyes, somewhat like the Green Gage, and with small, glossy, deep-green leaves. It is a most abundant bearer, and the fruit, which ripens the last of September, if carefully gathered, will keep in a sound state for more than a month, shrivelling slightly, but retaining its juiciness and fine flavor.

Fruit, large, about two inches long and one and three quarter inches in diameter, oval, largest in the middle, tapering to the apex, which is depressed, and narrowing to the stem, where it is abruptly hollowed out; suture distinct, running half round, one side little longer than the other: *Skin*, golden yellow, fair, smooth, somewhat mottled with green

under the skin, dotted with a few bright crimson specks on the sunny side, and covered with a thin whitish bloom: *Stem*, medium length, about half an inch long, rather slender, and obliquely inserted in a small cavity, on the somewhat elongated base: *Flesh*, pale yellow, thick, very melting, and firmly adhering to the stone: *Juice*, abundant, sugary, sprightly, and delicious: *Stone*, large, very long, rather narrow, compressed, and sharp pointed. Ripe the last of September.

10. KIRKE'S. *Pomological Magazine*, Vol. III, pl. 111.

Among the large blue plums, this variety (*fig. 43*) stands unrivalled. It is about the size of the Columbia, and surpasses that very good plum in its flavor, being nearly or quite

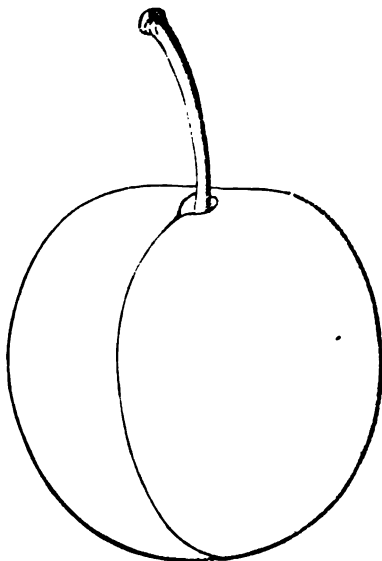


Fig. 43. Kirke's Plum.

as rich and luscious as the Green Gage. The *Pomological Magazine*, in describing it, says, that a "plum as hardy and prolific as the Orleans,—as handsome as the Damask,—and as good as the Green Gage, cannot be too extensively cultivated."

The origin of the Kirke's is unknown; it was first brought into notice by Mr. Kirke, whose name it bears, and was accidentally met with by that gentleman, in a fruiterer's window, in London. Upon tasting the fruit, he

found, to his surprise, that it excelled in flavor any purple plum he was acquainted with; and, upon inquiry, it appeared that the fruit was received from a gardener in the country, who had procured the variety from a gardener in his neighborhood, and that the original tree was introduced from some foreign country. The *Pomological Magazine* states, that it had not been found in the writings of pomol-

logical authors, as late as 1832; and since then, now nearly twenty years, no variety has been received in this country like it.

The Kirke's plum is as yet but little disseminated here; we have never met with it in a bearing state, in but few collections, and but few cultivators are acquainted with it. In the vicinity of Salem, where trees were early introduced by the late Mr. Manning, it is considerably grown, and justly esteemed one of the finest and most prolific varieties cultivated.

The tree is a vigorous grower, with wood resembling the Red Magnum Bonum, and leaves similar to the Green Gage; the annual shoots are moderately stout and smooth.

Fruit, large, about two inches long and two inches in diameter, roundish oval, broadest near the base, and narrowing little towards the apex; suture very shallow, extending to the point: *Skin*, rich deep-violet purple, netted with a golden russet in the sun, and covered with a thin azure bloom, which does not easily rub off: *Stem*, medium length, about three quarters of an inch long, rather stout, and inserted in a moderately deep and rather open cavity: *Flesh*, greenish yellow, rather firm, separating from the stone: *Juice*, abundant, rich, sugary, and delicious: *Stone*, large, broadly oval, and much compressed. Ripe in September.

11. HULING'S SUPERB. *Pomological Manual*, Vol. II, p. 55.

Keyser's Plum. *Pomological Manual*.

No American plum of any merit is so little known to cultivators generally as the Huling's Superb, (*fig. 44.*) It originated in Pennsylvania, about twenty years ago, and was first described in Prince's *Pomological Manual*, in 1832, and trees were extensively disseminated from the nurseries of the author of that work. A gentleman, by the name of Keyser, raised it from seed; but, as it was first brought into particular notice by Dr. W. E. Huling, of that state, it received his name.

As celebrated as this plum has been,—and we recollect of seeing it enumerated in a catalogue, in 1832, as being the largest of all plums, weighing about four ounces each,—we

never had the opportunity to see the fruit till last year, when we had some fine specimens from Mr. Vandine, of Cambridge. A spurious variety has been considerably cultivated and sold for it, around Boston, which is a very inferior fruit; and to

this circumstance we attribute the cause of its cultivation having been so much neglected here.

The true variety is one of the very largest plums yet produced, fully equal, if not superior, to the Washington, in this respect. Mr. Prince states, that "it seems doubtful which will attain to the largest dimensions, this or the Washington plum;" it is also a most excellent fruit. It has a firmer flesh than the Washington, and it adheres firmly to the stone.

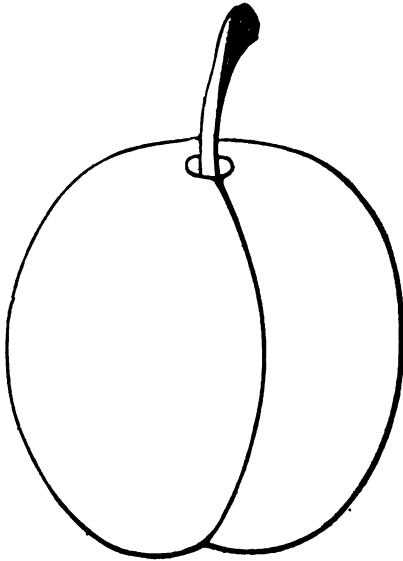


Fig. 44. *Huling's Superb Plum.*

The tree is quite peculiar in its habit; it has an exceedingly vigorous growth, with strong, blunt shoots, and the leaves are large, broad, and thick; the buds are also large, like the Green Gage, with remarkably prominent shoulders.

Fruit, very large, about two and a quarter inches long and two in diameter, roundish oblong, narrowing to each end, with the apex slightly flattened; suture rather shallow, extending half round: *Skin*, dull yellowish-green, very little dotted with dull red near the base, on the sunny side, and covered with a pale bloom: *Stem*, medium length, about three quarters of an inch long, very stout, swollen at the end adjoining the branch, and deeply inserted in a round, contracted cavity: *Flesh*, yellowish, fine, melting, and adhering firmly to the stone: *Juice*, abundant, rich, brisk, vinous, and excellent. Ripe in September.

12. SEMIANA. Kenrick's *American Orchardist*, 1832.

Blue Imperatrice, of some.

The Semiana plum (*fig. 45*) is a very well known and extensively cultivated variety, around Boston, where it has been introduced into many collections under the name of Blue Imperatrice, with which variety it has been confounded for a long time. It has also been made synonymous with the Prune Suisse, by Kenrick and other authors, though *Duhamel*, in his description, expressly states, that its "diameter is greater than its length;" while in all cases the Semiana is a quarter of an inch longer than its diameter. The Prune Suisse we have never seen in fruit, but the Fellenberg, recently disseminated as a new plum, is now said to be identical with it. If this is true, it is quite distinct from the Semiana, as a single glance at the wood and foliage will show.

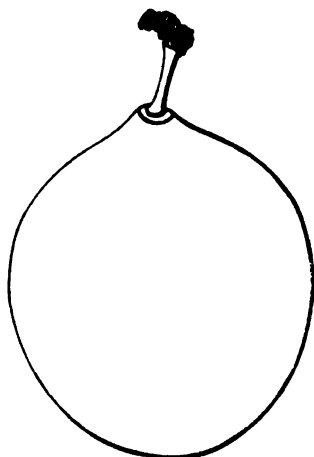


Fig. 45. Semiana Plum.

That it is not the Blue Imperatrice is well ascertained; we saw the latter variety in bearing in London, in 1844, and ate the fruit; and we have already stated, (Vol. XI, p. 406,) that it was a very distinct fruit, being a higher flavored and sweeter plum, though not so large as the Semiana.

We have been induced to believe the Semiana to be a native fruit; its origin we have, so far, been unable to trace further than that the first trees were disseminated from Salem, where, we believe, the original tree, from which all others have sprung, was growing not long since; but whether native or foreign, it is certain that up to the present time, no imported variety has proved identical with it.

The merits of the Semiana we think have been overlooked. It is one of the latest plums, fully as late as Coe's Golden Drop, and has the merit of keeping for a long time after gath-

ering, shrivelling slightly, but attaining a richness approaching to that variety. The tree is a most prodigious bearer, and the fruit appears to be less subject to the attacks of the curculio than many other sorts, probably from the firmness of its skin and flesh, which, from its lateness, does not become tender till long after that insect is gone; but whether we have given a proper solution of the cause or not, we have had abundant crops on Semiana trees, when the fruit of other sorts, a few feet distant, nearly all fell off, from the sting of the curculio.

The tree is a moderately vigorous grower, with rather slender, long-jointed, nearly smooth shoots, and remarkably acute buds: it comes into bearing quite young.

Fruit, medium size, about one and three quarter inches long and one and a half in diameter, of oval form, tapering off to the stem rather more than to the apex; suture scarcely perceptible: *Skin*, dark-blackish purple, covered with a dark-blue bloom: *Stem*, rather short, about half an inch long, curved, moderately stout, and obliquely inserted in a round, very shallow cavity: *Flesh*, dull yellowish-green, adhering firmly to the stone: *Juice*, abundant, with a rich, sprightly, subacid, and, when fully matured, excellent flavor: *Stone*, medium size, ovate. Ripe in October, and keeps a month after gathering.

ART. III. *The Long Green of Autumn Pear, with Remarks on its History, &c.* By Hon. J. S. CABOT, Salem.

SIR,—In the descriptive list of select varieties of pears, published in your Magazine for October, an error, doubtless inadvertently, has, as I think, been committed, and some not uninteresting particulars omitted, with respect to one of the varieties there noticed, viz., the Verte Longue d'Automne. As I have no doubt that entire accuracy and full statements of such particulars as may be supposed to be of interest, are both desired and intended, I take the liberty, for your information, to notice the error, and supply the omissions alluded to.

The Verte Longue d'Automne, as you designate it, is one

of the very oldest of our pears now in cultivation ; its origin and history are lost in its antiquity ; the former, probably, dating back to the time of that of the Autumn Bergamot, Bon Chrétien d'Ete, and others, of a remote period. The remains of a tree of this variety, with a trunk 15 to 18 inches in diameter, is yet standing in my garden, that, 40 years ago, was as large as it now is, with, at that time, every appearance of an aged tree ; and that, from a knowledge of the time when this garden was laid out, as well as that its past and present appearance justifies the supposition, I have no doubt it is at least 100 years old. Other trees of this variety, and, apparently, of about the same age, are to be found in this city, and, I doubt not, in Boston or its vicinity also, unless that, as is most probable, in the latter city they have been compelled to yield the ground they occupied to other uses. This pear, I have no question, is of foreign origin, and as little doubt that it was among the very first introduced from abroad into this country.

Its merits have, I think, been somewhat overlooked, and its place sometimes supplied by more recent introductions, that, frequently, have not much but novelty to recommend them. I have been familiar with this fruit from my boyhood, and have eaten of it every year, probably, for the last 40 years, and though it may not be quite first-rate, or to be ranked quite on an equality with some of them, in point of excellence, I have considered it worthy of a place with the Brown Beurré, the St. Michael, and St. Germain, old established favorites, that even now, when produced in perfection, have few or no superiors. The fruit of the Verte Longue d'Automne is, as cannot be said of the others, yet fair, free from blight or canker, and shows no sign of deterioration. The tree is a most abundant and constant bearer, the fruit, as it were, strung on to the branches, in strings, like ropes of onions ; it produces yearly large crops of pears, of a very pleasant, though not high flavor, somewhat not unlike that of the Sweet Water grape, and, like it also, a mere bag of juice. How far, if at all, its age should prevent it from being considered as worthy of a general or very extended cultivation, I leave to others to decide, and about this, intend to express no opinion.

With respect to the correct name of this variety, concern-

ing which some remarks are made in the article alluded to, I have no information to impart. When I first remember it, at a time when not much attention was given to the subject of the nomenclature of fruits, it was, in this city, frequently called the St. Germain, probably from some supposed general likeness to the pear of that variety, but to which, in fact, it bears no resemblance; and in Boston was sometimes called the Swan's Egg, though with no better claims to that appellation. So far as my knowledge extends, the name "*Verte Longue d'Automne*," very probably the correct one, was first applied to it by the late Robert Manning, of this city, who, as I learnt from him, in repeated conversations in relation to it, knew nothing of its origin or history, and previously was ignorant of its name, in consequence of a description of the fruit or trees, of this variety, having been received by him from Europe, under that name.

To distinguish this pear from that usually known as the Long Green, it has been designated as the Long Green of Autumn, sometimes of Europe, the other being called the Long Green of Coxe. If the appellation Long Green, descriptive, in some degree, of both varieties, is a matter of moment to either, I have no doubt that the one to which this communication relates, would, if that is the one by which it has been known and cultivated in Europe, have, by priority of claim, a prescriptive right to the appellation; but, as the claims of each to it are now so established by use, it will, probably, be found necessary to continue the application of it to each variety, with the additions now customary, to severally designate them.

The error to which I alluded, in the commencement of this communication, relates to the time of ripening of the *Verte Longue d'Automne*—this, in the article referred to, is said to be about three weeks after that of the Long Green—but which I should place at a much later period, and consider that November may be said as its season of maturity.

I have troubled you with this long communication, on a matter of no great moment, but in which I felt some interest, because it relates to a fruit,—perhaps as much from youthful associations as its own merits,—that is with me an established favorite.

Salem, Oct. 25, 1849.

We are not sure that we should not consider an occasional error or omission in our descriptive account of fruits, similar to those alluded to in the communication of our correspondent, quite pardonable, if we thought they would always be the means of drawing out such valuable information as that imparted in Mr. Cabot's communication. It is the fault of our amateur cultivators, that they do not communicate the information they possess more freely. Mr. Cabot is one of the most observing cultivators in the country, and his mind is stored with pomological knowledge, as his excellent article at once attests. We were upon the point of cancelling all we had written about the Long Green of Autumn, after it was in type, because we did not consider it so complete as it is our intention to make all our descriptions of fruit; but, as we did not know when or where we could obtain the very information which Mr. Cabot has so happily and timely supplied; and, as we thought it desirable to clear up the confusion existing in regard to so good a pear, before it should become "worse confounded," we, upon second thought, concluded to let it appear, imperfect as we deemed it at the time.

We are indebted to Mr. Cabot for the facts communicated, and we sincerely hope that he, as well as all amateur cultivators, who possess information on the important subject of pomological science, will be induced to impart it for the benefit of those who are seeking such knowledge.—*Ed.*

ART. IV. *Stray Thoughts on Roses.* By T. RIVERS, Sawbridgeworth, Herts, England.

WE have already copied several capital articles from the *Florist*, a work under the superintendence of our correspondent, E. Beck, Esq.; and we stated that we should give other articles of value which we might find in its pages. The following paper by Mr. Rivers, who is well known for his zeal in the culture of the rose, will be read with pleasure, and afford valuable information to all who appreciate this queen of flowers.

That part of the communication which refers to autumn pruning, however, should be cautiously followed north of Washington. Many of the perpetuals are not perfectly hardy, and, without little protection, often lose a portion of their shoots in winter; and though fall pruning may, and we know will, in a degree, bring earlier roses, still it should be adopted with caution. But south and west of Washington, all Mr. Rivers's remarks may be strictly followed.

The list of really good roses is well worthy of recommendation to every amateur; they are all fine, and will never fail to afford a good bloom of splendid flowers.—*Ed.*

For some time past, those beautiful roses distinguished as "hybrid perpetuals" have been gradually rising in the esteem of all rose lovers; but this is a crowning season of favor, for they have proved to be not only the latest but the earliest of all roses. On the 14th of May last, I gathered a fine bouquet of flowers from the open borders, of the following sorts: *Baronne Prevost*, *Madame Laffay*, *William Jesse*, and *Duchess of Sutherland*. These, and many others, have been in full bloom ever since that period. How pleasant is it to reflect, that these are not, as is the case with our summer roses, the beauties of a day; in August, September, and even in November, we may have roses in abundance. A rich soil and a warm climate is, however, necessary for very late flowers. In the north of England, I have often seen them with abundance of buds in autumn, which had not opened on account of the cold and stormy weather. In the midland counties, and in the south and west, they will give their flowers in profusion under the most simple culture. Plant them in a richly manured soil, give them abundance of liquid manure all the summer, and be sure and shorten every blooming shoot, as soon as its flowers have faded, to within three or four buds of its base.

My roses of this group were this season, as mentioned above, most remarkably early. The season, of course, had something to do with it, but the management of the plants, entirely the result of accident, accelerated their blooming at least ten days or a fortnight; let me then tell, in as few words as possible, how I have ascertained the best mode of

producing very early hybrid perpetual roses in the open air. In April, 1847, after our long and severe winter, I found some dwarf plants of hybrid perpetual roses of nearly all the leading sorts left on hand; these were planted out towards the end of the month, and pruned quite close. Owing to the dry summer, they made very short-jointed shoots, and were in autumn, for the most part, dwarf compact bushes. Under the usual course, these plants would have been cut in quite closely in March, 1848, but they were forgotten till they were in full leaf. Observing their flower-buds to be in a very forward state, I determined to let them remain untouched. They came into flower in the middle of May, and have bloomed most beautifully. Plants of the same varieties, pruned in the usual way early in March, commenced to bloom about the 8th or 10th of June; thus giving a difference of more than three weeks between plants pruned in spring, as usual, and those not pruned.

Now for a method of bringing this into practice. To have early roses, we must not think of removing our plants every season; how then is it to be brought about, this new non-pruning system? Simply thus. Early in September, shorten all the strong and robust shoots of those hybrid perpetual roses which you wish to bloom early, to within six or eight buds of their base; they will then, in the course of the autumn, push forth laterals, the growth of which will be stopped by chilly November. They will thus form short spurs; from these, and from the bases of those shoots which bloom in September and October, mind that every truss of flowers is cut off as soon as faded. You will have an abundant crop of very early flowers. Do not touch your plant with the knife after October.

How gloriously beautiful have been, and are, the hybrid perpetual roses this season! The glowing warmth of May gave them a vividness of color quite unprecedented. *Baronne Prevost* has been perfectly splendid. This rose ought not to be mixed with others; it is so massive and grand that a large bed in every good rose garden should be appropriated to it,—plants are cheap and plentiful. *Duchess of Sutherland* never before shone in such beautiful array. *Madame Laffay*, *William Jesse*, *Dr. Marx*, *Auberon*, *Augustine*:

Mouchelet, Lady Alice Peel, Louis Bonaparte, Robin Hood, Duc d'Aumale, and Marquise Boccella, have all bloomed remarkably early this season, and most brilliantly—in fact, they are our earliest, as well as some of our finest late roses.

Were I a *millionaire*, my rose-garden should be a park, and my groups of hybrid perpetual and Bourbon roses numerous “as leaves in Valombrosa.” By the way, planting mixed clumps or beds of hybrid perpetuals is not “good practice;” fix on a few really good sorts, and plant a clump of each. Aubernon, Lady Alice Peel, Duc d'Aumale, and Marquise Boccella, are all dwarf compact growers; they are all most beautiful, but, if planted in the same bed, are soon hidden by such a giant, or perhaps giantess, as Baronne Prevost and some others.

How difficult it is to find among the numerous new varieties of this family any one to excel our established favorites. We now want a scarlet La Reine, a yellow Madame Laffay, and a white William Jesse; there are, however, a few new roses really worthy of our notice; a word or two about them will perhaps not be out of place as a guide to purchasers. What a crowd of names of new autumnal roses just now pours in upon me; my brain recoils at the dense cloudy mass, with only here and there a star to brighten it.

I well remember the days when the little word “new” to a flower or plant was at once a passport. In my very early descriptive catalogues of roses, all that was required was to have a new rose at a high price, its quality was of secondary importance—the price sold it. The floricultural world is now, perhaps, more sad, certainly more wise.

It has therefore become the duty of every cultivator of roses to prove every variety before he offers it for sale, unless offered at the risk. Upwards of one hundred varieties of hybrid perpetual roses have, as the French term it, “been placed in commerce” since the summer of 1846; from these not more than ten or twelve could be selected as really distinct and good; they are nearly all pretty,—for what rose is not?—but they are not *better* than those favorites enumerated in the early part of this article. Among the new roses that have bloomed this season in brilliant perfection, Géant des Batailles holds the first place,—owing, I presume, to the heat

and warmth of May adding to its usual vivid tints, this rose was the most brilliant, the most beautiful, I ever beheld. The figure of it given in Mr. Paul's *Rose Garden* gives but a very inadequate idea of its rich, deep, glowing scarlet; it is not a very free grower when budded on the Dog rose; the *Rosa Manetti* seems to suit it admirably. I have never seen such flowers as my plants budded on that stock have produced.

Cymedor is another brilliant rose of this class, in color approaching perhaps to the Brompton stock? No; yes; no; who can describe the color of some roses? "*C'est impossible, Monsieur,*" said Monsieur V., with a violent shrug of his shoulders, to give more effect to the "*sible.*" "Yes, Monsieur," I replied, "God will give us, in his great bounty, such beauties as cannot be copied or described." Monsieur V. was silent.

Soleil d'Austerlitz is another of these brilliant crimson roses, with neatly cupped flowers, quite worthy of the notice of the amateur.

Commandant Fournier is also a brilliant colored rose, of a bright carmine; a very nice variety. Comte Montalivet, apparently a seedling from William Jesse, is a fine and very large rose, much deeper in color than its parent, with flowers finely cupped, not quite full, owing to which it blooms in great perfection in autumn. Jacques Lafitte, which last season was so superb, has not proved a good early blooming variety; its flowers have been hitherto crowded with petals, and imperfect. I observe, however, to-day, (June 19th,) that it is producing some flowers of the same deep rich rose color as last season. Reine de Fleurs is a new and very beautifully shaped rose, varying in color from pale rose to rose. It is most elegantly cupped and decidedly a good variety, but without novelty in color. Madame Verdier is also remarkable for the extreme perfection of shape of its finely cupped flowers, which are of a pale blush. The plant is very dwarf, and forms a compact little bush. Bouton de Flore, of a pale rose color, is remarkable for blooming in very large clusters, forming a fine bush. L'inflexible is a new rose of great beauty, not for novelty in color, as it is merely of a pinkish rose, but for its neatness and beauty; it is, indeed, in shape

quite perfect. Then we have Henri IV, Duke of Devonshire, Comte Derby, Nadine Fay, Montaigne, Ariel, Admiral d'Esteing, Lindley, Mathilde Jourdeuil, Olivier de Serres, Titus Livius, or "Tite Live," Reine de Matin, Gulistan, and a host of others from that fertile source of new roses, France. These are all pretty enough, but novelty in shape or color is not to be found among them, and yet they have all been sent out at high prices. The descriptions, written by those who raised them, in the usual elastic French manner, were so tempting, and then the price, generally twenty-five francs each, made one suppose that they *must* be fine. Plenty of disappointment has been reaped; still, it is the duty of the rose-grower to prove all these novelties. Among them will occasionally be found a gem, like Géant des Batailles, which will reward him for many trials of his patience and his purse; and really such a reward is required. About three years since, I paid twelve pounds for six new hybrid perpetual roses, from an amateur, a French "gentleman," *not one* of which proved worth a farthing. They manage these things well (for themselves) in France, and seem to think that every rose that is new must be good; but we must endeavor to manage better, and to avoid this, as well as many other Gallican peculiarities. The rose grower should prove all his new roses before he sells them; and the real lover of roses, instead of planting a bed of unknown novelties, should make a group of Madame Laffay, another of Baronne Prevost or La Reine, another of Duc d'Aumale, and so on, preferring to have a small clump of each sort, rather than a large one of mixed varieties. The lawn may thus be painted with excellent effect. It will perhaps be not out of place here to give a list of a few sorts which are really good, and of which the plants are now sold at a very moderate price, so that a clump of each would not be at a heavy cost.

1. Aubernon : crimson; habit compact, and rather dwarf.
2. Augustine Mouchelet : crimson, very brilliant in dry weather; habit a little more robust than No. 1.
3. Baronne Prevost : bright rose (how *very* brilliant it has been this season !); habit vigorous and robust, fit for a clump in centre of lawn.
4. Comtesse Duchâtel : bright rose; flowers most elegant and perfect in shape; habit compact, medium.

5. Dr. Marx: brilliant crimson; habit robust, vigorous, and rather tall.
6. Duc d'Aumale: brilliant crimson; habit rather more dwarf than No. 1.
7. Duchess of Sutherland: bright, or sometimes pale rose; habit vigorous, equal to No. 5.
8. Lady Alice Peel: deep pink; a most perfect and beautiful rose; habit compact, and rather dwarf, like No. 1.
9. La Reine: brilliant glossy rose; flowers large, perfect in shape, and most splendid; this very fine rose does not bloom so well early in the season as towards its close; habit rather dwarf, about equal to No. 1.
10. Madame Laffay: rosy crimson; habit about equal to No. 2.
11. Marquise Boccella: very pale flesh; habit dwarf—more so than any of the preceding, and very compact.
12. Robin Hood: bright rosy pink; a most elegant and beautiful rose; habit about equal to No. 2.

Now let the genuine lover of roses imagine a fine neatly dressed lawn, with twelve well-arranged groups, containing from ten to twenty plants each of the above beautiful roses, in bloom from May till November, exhaling their sweet perfume in the freshness of the morning and evening, and glowing with beauty under the beams of the mid-day sun. Can any thing in floriculture be more desirable, or more deserving of admiration from the lover of the works of nature?

ART. V. *Garden Notes, No. 2.* By Dr. M. A. WARD,
Athens, Ga.

THE "Camak's Red-twigg'd peach" of Messrs. Hovey & Co.'s Nursery *Catalogue*, I suppose to be identical with "*Lignum rubrum, a curiosity*" in that of Mr. Prince. I greatly prefer the former name, because it is commemorative of a most excellent man and zealous pomologist. May it live a thousand years. I trust Mr. P. will be willing to cancel the latter, out of regard to the memory of his friend, and because, as a *descriptive* name, it is not exactly correct; for it is not

the *lignum*, but the *cortex* only of the young growth which is *rubrum*.

The *origin* of varieties of fruit has become a matter of some interest among nurserymen, and at Fruit Conventions; and if it be true, as I suppose, that Messrs. Hovey received their specimens from Mr. Prince, and he his from Mr. Camak, I have thought it might be worth the while to place upon record what I happen to know regarding the introduction of this tree into our nurseries.

Several years ago, the late Mr. Camak obtained from me two or three young trees, which he said he was going to send to Mr. Prince, as "a curiosity," and I received mine from the Rev. Mr. Gambel, of Henry county, in this state. In the spring of 1835, the latter gentleman sent me a seedling of the previous year's growth, which I took to be some sort of *cornus* or willow, but the bearer told me it was raised from a peach stone that Mr. G. had received from a friend at a distance. Expecting to hear something more about it from Mr. G., I was not careful to remember the place named, and as he soon after emigrated from the country, I lost all clue to the recovery of it, but my impression is, that it was either from the Indian Nation, or from Texas. My tree soon came into bearing; and as it propagates itself *true* by the seed, it soon became abundantly disseminated. The fruit is large, long oval, compressed, with a distinct suture, and long protracted point, or mamelon. Both flesh and skin are of a bright yellow, without any red on the cheek next the sun. It ripens so late that it only occasionally is in perfection with us—but when it does become eatable, is much praised by those who like clingstones. It is certainly very juicy, and exceedingly high flavored, though much too poignant for my taste, reminding one of a pine-apple not quite ripe.

It has very properly been placed in the catalogue of ornamental trees; for, if worthless for the table, it is capable of being used with admirable effect in landscape gardening. Its vermillion-colored twigs in winter, and golden foliage in summer, catch the eye at a great distance. Its leaves, which are without glands, so soon as they are fully expanded, that is, about the middle of May, in this climate, change to a brilliant yellow, as if struck by an autumnal frost, but continue

fresh and healthy on the tree as long as those of any other peach.

But there is, what I consider a much more remarkable "curiosity" in the peach tree line. It is that of which I think I sent you a specimen twig some years ago, under the name of the Beville peach. Its dwarfish and compact habit is truly unique. Its branches are as short and sturdy as those of a Roman apricot. I have now a tree, eight or ten years old, grafted upon a plum stock, which would make the narrow eyes of a Chinaman open wide with delight. It measures about eighteen inches to the first branches, and its nearly globular head reaches to the height of about four feet, reminding one, in winter, of a currant bush, trained tree-fashion, but when in bloom, so dense are the flowers that, were it not for the young leaves, whose green points begin to pierce through them, the whole head, seen at a distance, might be mistaken for a gigantic blossom of the pink-colored *Hydrangea*. The petals are large, and the leaves have reniform glands; of course there is not room for one flower in a hundred to expand its fruit. Indeed, a perfect specimen has never yet ripened with me. It is, however, said to be very good, and I have lately heard, that it is grown, for its fruit, in the neighborhood of Nashville, Tennessee.

I am indebted for my trees, to the kindness of J. D. Watkins, Esq., of Elbert, who obtained them for me from the garden of J. E. Calhoun, Esq., of Millwood, S. C., a gentleman almost as well known at the south for his zeal in promoting rural improvements, and for his unostentatious liberality, as is his near relative, the great senator, for his political renown. In a note to me, Mr. Watkins states, that Mr. Calhoun raised this peach more than twenty years ago, from a stone, brought by a man named Bevil, from some Indian town of the old Creek Nation, in Georgia, and that the stones uniformly produced the same sort. He recommends that it should be called either the "Cherokee," or the "Calhoun" peach.

Echinocactus Ottónii has flowered with me twice this year. Some time in June last, two buds appeared on ribs diametrically opposite. They grew with equal step till when about the size of buckshot, then one of them stopped short, and

remained quiet, while the other advanced to expansion, and the flower had fallen. It then started and ran the same course. The plant, in its pot, has stood in the open garden, without much care, except to remove its numerous offsets as they formed, and to give it an occasional watering of soap-suds. About the middle of September, another crop of six buds showed themselves, one on every alternate rib, except the thirteenth, where two sterile ribs came together. As before, when as big as buckshot, all stopped growing till one had pushed forward into bloom and fallen. I expected that they would then start and come forward one at a time; but to my surprise, the remaining five buds all advanced equally together, and on the morning of the 16th inst., when they all perfectly expanded, and remained so, till the evening of the next day, presenting a spectacle of floral beauty rarely seen, and hard to beat.

My *Cereus Poinsettii* has, this year, bloomed for the first time. This plant is about 10 feet high, with only three joints or strictures in the stem, which has eleven ribs, and is about two inches in diameter for three-fourths of its height. It has never put forth any sort of a branch or offset. It is strictly night-blooming, even more so than the *grandiflora*, the flower of which resembles that of this, except in color—this being of a uniform, delicate blush. It opened the night before it was expected to do so, and was found withering soon after daylight the next morning.

Cereus nigricans bloomed with me last year, but not this. It is a day bloomer, and the flower resembles that of *quadrangulàris*. This plant is 10 years old, about 4 feet high, and about $1\frac{1}{2}$ inches in diameter, showing no joint or stricture whatever, except at one place, where it was accidentally broken, and has healed over. It has never made any offset. It set its fruit—of a globular form, the size of a black walnut, and marked like the surface of the stem—this remained of a dark olive-green color all summer. Some time in October it changed suddenly to a chocolate-color, becoming soon of a deep red. It continued on all winter, but cracked across horizontally on one side, showing its glairy, whitish, semi-transparent pulp, thickly dotted with rather large, deep black, but not shining seeds.

Wistaria sinénsis and the Yellow Banksia rose, trained to the same post, which should not be less than from 16 to 20 feet high, make a most elegant combination.

Athens, Ga., Oct. 20, 1849.

We are glad to welcome our old correspondent, after so long an absence. His communications will always be read with interest, and we hope No. 3 will be soon forthcoming.—*Ed.*

MISCELLANEOUS INTELLIGENCE.

ART. I. General Notices.

Rare Conifera and Improvements at the Cairnies, Perthshire, the property of George Putton, Esq.—The following article on the Conifera, which have proved hardy in the North of Scotland, we copy from the *North British Agriculturist*, published at Edingburgh, and commend it to the particular attention of gentlemen who are making plantations of this tribe of trees, or who may be about forming pinetums, which are now attracting, and deservedly too, so much attention in Great Britain. Though our country is rich in species and varieties of the pine and fir tribe, yet there are a great number of equal beauty, natives of Southern Europe and Asia, as well as of our new territory of California,—which it is very desirable to add to those we already possess; but as it is uncertain how many, and which, of the great number recently introduced to Europe will prove hardy, only upon trial,—and as this can only be done at great expense, we are glad to avail ourselves of the experience of others, and deduce from their results what may probably be accomplished in our own clime.

Perthshire is in the North of Scotland, on the eastern coast, in about latitude 57° North, five degrees North of London, and where the weather, during winter, is very much more severe than around the latter city; and such of the pines as have proved hardy in Perthshire, we do not doubt will be so in the latitude of Boston. *P. excélsa* and *austriaca*, *Cédrus Deodàra*, *Abies Smithiana* and others, we have already shown are quite hardy here.

Several of the species enumerated below, are yet rare and extremely beautiful, and command high prices; and to purchase them and at once risk them to the inclemency of our severe winter, without any knowledge of their capability of resisting cold, other than that which may be inferred from their native habitats, is what but few can afford, or are willing to do; but with such evidence as that now before us, there will be but little risk in planting out any of the species or varieties named—and as they become more plentiful, and obtained at moderate rates, those that succeed can be duplicated to any extent; the loss of one or two will not be regretted, if

the majority prove hardy. We again would invite all amateurs to try all the kinds which can easily be procured, and we hope the time is not distant when we shall be enabled to announce their complete success in our climate.

—*Ed.*

"The lands and estate of the Cairnies were acquired from Lord Lyndoch, by James Patton, Esq., of Glenalmond, father of the present proprietor, between 40 and 50 years ago. They were then partly cultivated, partly pasture, and partly heath and moorland. Without planting, unless on the north, where, on the slope skirting the river Almond—which, for about a mile, bounds them on the north—there was a plantation, now grown to beautiful timber; they were much exposed on all sides, even on the north, where the planted slope was far too steep to yield much shelter. From the river, the bed of which is about 500 feet above the sea, the lands rise at first abruptly, and then gradually, till they reach their highest altitude of 600 feet above the sea, whence again they gently slope to the south to near their southern boundary, where they march with Mr. Smith's estate of Keilour, celebrated for its pinetum.

Altogether, the lands occupy a ridge of large extent, running from east to west, exposed for the most part to every wind that blows, especially to westerly winds, which are here the most prevalent and severe. And these sweeping off the lofty Grampians—just sufficiently remote to afford them no protection—must have been severely felt, especially in the spring months. On the north they were less exposed, for Lord Mansfield's cultivated lands of Logielmond, which lie beneath the Almond, rise in an unbroken ascent till they run into the hills which bound the horizon on the north. On the south-west and east all was open, and the adjacent lands lay lower. There were few fences, and no drains. The lands were let into small occupancies, and the cultivation wretched.

Thus situated, and with a soil for the most part naturally cold and damp, consisting in the higher parts of a peaty texture, resting on a bottom of friable, sandy clay, while in the lower parts it consisted of a *detritus* of the old red sandstone run into a loam, the lands of Cairnies afforded an ample field for improvement, both by draining, fencing, and planting; and, in especial, from their altitude, diversity of soil and exposure, they were well fitted for testing the aptitude of foreign Coniferæ to many localities.

As yet, however, spruce and larch, then but recent, if not novelties, were the rage and order of the day. And of these Mr. Patton, senior, planted largely, wisely throwing them into belts around the various sub-divisions of the lands. These have now attained a great height, and, with spruces planted outside, all feathered to the ground, form excellent shelter. These belts cannot be too strongly insisted on as the best means of improving climate in high localities.

Besides these plantations, Mr. Patton, at the same time, tried the experiment of a *whin* or *furze* fence, to the efficiency of which, after the tear and wear of 40 years, I can bear unpleasant testimony, as it was not without going a great way about, and some sharp pricking into the bargain, that the present proprietor and I could get an opening to pass through it.

But what I would more especially refer to, in the late proprietor's plan-

tations, is a fine row of *Picea balsamea*, (the Balm of Gilead Fir,) which must have been then extremely rare, and which have now attained a height ranging from 30 to about 46 feet. On measuring the girth, I found one of them 3 feet, 8 inches, at one foot above the ground. These were planted about 34 years ago; the trees are fresh and vigorous, and likely to continue so for many years to come. The age and size they have attained already, upset what Mr. Loudon has stated of this tree, in his *Aboretum*, where he notices it as growing to 20 or 30 feet, and not of more than the same number of years in duration. As Mr. Loudon was cautious in his statements made so absolutely, may he not have referred to an instance occurring in some rich sheltered *holm*, instead of the *originally* heath-clad *habitat* which these now occupy? This point deserves inquiry. I would especially direct the attention to the *Balsameas*, as probably among the largest and finest in the country. They are very handsome trees, branched to the ground, and, as the wind lifts the thickly clad branches, the foliage, which is silvery underneath, glitters as if bespangled with hoar frost. Planted round a semi-circular field, outside a surrounding plantation, they produce a fine effect. Thus much for what had been accomplished by his father, when the present proprietor succeeded.

At this time, and previous to Mr. Patton's commencing his improvements, this property was sub-divided into many small holdings—the tenants having little capital and less enterprise. But having, at a very considerable expense, thoroughly drained the whole, erected suitable farm buildings, with cottages for the workmen, and put the land under an improved system of cultivation, he has now the satisfaction of seeing stock and crops of all kinds produced, which would do credit to the most fertile districts, affording sufficient evidence that the increased return will amply repay him for all his outlay, besides the gratification of knowing that he has, by giving employment to so many workmen, largely contributed to their comfort, and entirely changed the aspect of his estate.

Mr. Patton began by planting the rarer Coniferous plants about the year 1844, sparingly at first, and more extensively thereafter, as he found they succeeded. Those first planted were put out, up and down, in belts; but more recently he has formed and planted a *Pinetum* on the higher grounds, where the soil is, as I have noticed, of a peaty texture, on a sub-soil of sandy clay, drained. He has also planted in a belt of the old red sandstone base, leading down the slope from the higher grounds to the Almond, on the north, where, on a flat bottom rising up on the south, into a steep bank of rich alluvial soil, there is another *Pinetum* being planted. Here the various species of *Abies*, *Pinus*, &c., are kept in groups, the trees of each variety being kept by themselves—a much better method than promiscuous planting.

It is impossible, in a notice of this kind, to offer observations individually on so extensive a collection of Coniferæ; and again, as in a previous notice of the Belstane Coniferæ, I must restrict my remarks to a limited selection of species in each section.

Many eminent authorities, such as Endlicher, Paxton, &c., disapprove

of keeping up the sectional divisions of this family into *Pinus*, *Cedrus*, *Abies*, and *Picea*; yet, after being set aside into sub-divisions, under each of these respective heads, some varieties in each having the same specific name as *Pinus excelsa*, *Abies excelsa*; *Pinus religiosa*, *Abies religiosa*, &c., where the kinds are specifically different, I hold it better to adhere to the original method, which, if not formed, was adopted by Loudon, and other eminent authorities. Yet the pine grower must lay his account with finding the same thing under the several heads of *Pinus*, *Picea*, and *Abies*; e. g., *Picea Webbiana*, which rejoices with one as *Pinus Webbiana*, with another as *Abies Webbiana*, while the authorities preponderate in classing it among the *Piceas*, a proof how closely one section runs into another.

Of the section *Pinus*, containing like our own *P. sylvestris* generally but two leaves in a sheath, I would instance first—

Pinus pyrenaica.—A native of Europe, of the Pinaster character, found in the Sierra of Segura and Cuenca, in Spain, sometimes in the Pyrenees, whence its name—quite hardy—*synonyms*, *P. penicillus*, *P. hispanica*, *P. halepensis major*. Spanish name, *P. Nazaron*.

Pinus Pallasiana.—An inhabitant also of Southern Europe, growing on Mount Etna, at an elevation of from 4000 to 6000 feet; still rare, and of considerable beauty. This is *Pinus maritima* of Pallas, *P. taurica* of another, and *P. Pallasiana* of Lambert.

Pinus Fischeri belongs to the Pumilio section—is a new and rare kind.

And lastly, in this section, I would notice the newer and yet rarer

Pinus austriaca, of the Laricio tribe.—This is a beautiful and distinct kind, with horizontal branches and rich dark foliage, of rapid growth—in every respect commendable—provided it is protected, when young, from hares, which may be efficiently done by a few spruce twigs put round the base. I measured one of the trees here, and found it 10 feet, with a summer shoot of 1 foot 10 inches. It is a native of Europe, and perfectly hardy.

The following have, for the most part, 3 leaves in a sheath :—

Pinus Llaveana, Loudon, *P. cembroides* of Endlicher.—This is often a twin-leaved species. It was found in the forests of Mexico, between Zimapan and Real del Oro, and sometimes near Sultepec, of about 30 feet in height, and having, like some others, *edible fruit*, which is brought a great way to market at Santa Ines, and Santa Barbara, by the native Indians; ascertained to be quite hardy.

Pinus Ponderosa, so named from the heaviness of its timber; it is a tree of about 100 feet. Inhabits Northwest America, at the river Spokane, and at the Falls of Colombia is a splendid species; but subject, *it is stated*, to the attack of a beetle; I think at Ballinallock. It is yet rare and quite hardy.

Pinus macrocarpa of Lindley, so named from the great size of the cones, some measuring, as Hartweg observed in the account of his recent explorations in California, 15 inches in length, while Mr. Gordon, an excellent practical authority, notes the cones as being of the weight of fully 4 lbs. each. It is found in North-west America, ranging from 40° N. latitude, to the bounds of perpetual snow; growing near New Albion, in swampy

places. Hartweg found it in the San Antonio range, near Monterey, at 4000 feet of elevation. It is a robust species, reaching from 80 to 120 feet, and sometimes 4 feet in diameter. Endlicher questions whether this is not the same with the *P. Sabiniana* of Douglass; it certainly is not. It is considered to be undoubtedly hardy. It is still rare and young here.

Pinus insignis.—A Californian species, one of the most beautiful of the genus, stands an ordinary winter; but its perfect hardihood is questionable, as it was killed in some parts in the severe winter of 1837–38. It has stood the winter here as yet. Hartweg, in his recent account of the vegetation of California, holds this species as identical with *P. radiata*, and *P. tuberculata*, noticed below, the different forms and habits giving rise to the synonyms, being attributable to local causes.

Lastly of this section, there is here the very beautiful and rare *P. persica*; though derived from the South of Persia, (hence its name,) it has been found to be undoubtedly hardy; very new and scarce.

(To be continued.)

ART. II. Domestic Notices.

Annual Exhibition of the Cincinnati Horticultural Society.—The exhibition of our Society was a most successful effort, satisfactory to all, and one that you would have been pleased to have witnessed. I wish you could have been present to have enjoyed it, and to have done justice to it with your able pen. An efficient report from the appropriate committee is in press, a copy of which I will send you, and of which I hope you will take some notice.—Yours, respectfully, A. H. Ernst, Cincinnati, Oct., 1849.

Messrs. Hogg & Son's Collection of Plants, at Yorkville.—Being in New York, we called at the nursery of Messrs. Hogg, and in looking through the greenhouses, noticed the following new or interesting plants:—*Plumbago Larpéntæ*, *Adámia cyànea*, *Tropæolum Lobbiànum*, *Hindsia longiflora* and *violàcea*, *Hénfrya scàndens*, *Torènia asiática*, *Gloxinia Teuchlèri*, *Gardènia Sherbourni*, *Scutellària Ventenàti*, and many others. Messrs. Hogg have also a fine collection of Orchideous plants, mostly unnamed, received from South America, and among them some fine *Stanhopeas*. The whole collection we found in very neat order.—Ed.

Third Annual Exhibition of the New Bedford Horticultural Society.—DEAR SIR,—I send you reports of the several committees on fruits, flowers, and vegetables, exhibited here, on the 26th, 27th, and 28th of last month, it being the Third Annual Exhibition of the New Bedford Horticultural Society; of which reports you are at liberty to make any and whatever notice you may choose, in your Magazine.

Although our means are small, and until recently these means have been almost wholly unimproved, still there is some little horticultural taste and interest here, which we hope to increase, and which, in time, we trust will enable us to overcome, or at least greatly neutralise, many of the natural disadvantages of our location. Our soil, however, notwithstanding certain

opinions to the contrary, which have heretofore been put forth as facts, by those who, perhaps, after all know very little about New England, is very favorable to the growth of the pear: and nowhere have I ever seen larger or fairer specimens of this truly valuable fruit, than in New Bedford. The pear tree is also here very healthy and vigorous, and rarely subject to any disease.—*Respectfully, yours, &c., Henry H. Crapo, New Bedford, Oct. 12, 1849.*

[Our space is so much occupied this month that we are under the necessity of deferring the report until our next number, when we shall give as much of it as our room will allow.—*Ed.*]

Botanical Riches of California.—It is probably well known to many of our readers that Mr. W. R. Prince, of Flushing, is now on a visit to California, where he arrived, by the way of the Isthmus, early in June. From an article in the *Pacific News* it appears that he has turned his attention to the Botanical riches of the country, and has already made some acquisitions which will be of more value to lovers of beautiful trees and shrubs, than even the golden sands of the Sacramento. We copy the following from the paper above-named:—

“Having landed on the California shore on the 13th of June, we soon wended our way to the lateral ranges of the Sierra Nevada, bounding the San Joaquin and its tributaries. Leaving the companions of our journey, and some laborers I had brought from Long Island, to wash the golden banks and bars of the Stanislaus and Tuolumne, I proceeded to amuse myself by rambling over the mountain ranges and traversing the ravines of the spurs of the Snowy Mountains, and at leisure I intend communicating the results of my tour.

For the present, I will simply remark that there are hundreds of species of trees, shrubs, herbaceous and bulbous flowering plants indigenous to California, which are totally distinct from those found in other parts of the globe, and the most important of which are entirely new to the botanic world. The most important of these are two species of pines, and another of cedar, which attain each a diameter of eight to twelve feet, and which comprise dense forests of the finest timber in the world, between the extreme spurs and central range of the Sierra Nevada, and whose existence there in such masses is almost unknown even to those now settled in California.

A railroad connecting those immense forests with the San Joaquin or some navigable branch, would speedily render the aid of Oregon, as regards supplies of timber, entirely nugatory. Of the oak (*Quercus*) there are five species, three of which are timber trees and two shrubby and unavailable. The arbor vitæ, growing in the pine forest referred to, and forming a most regular and beautiful cone, is a distinct species greatly assimilating to the *Thuja sibirica* in foliage, and attaining to a height of eighty to one hundred feet.

In other localities there are found two species of ash, one of alder, a myrica twenty feet high and two feet in diameter, a *Photinia* of great beauty, fifteen feet high and two feet in diameter, several species of *Rham-*

mus, a species of crab apple from which the Indians make cider, a species of the *Cercis* or Judas tree, a clematis, honeysuckle, symphoria, and *Cephalanthus*, with some species of grapes, two fine species of raspberries, two species of blackberries, several species of currants, a gooseberry, two varieties of the strawberry of a new and peculiar species, with a large and excellent fruit, a *Calycanthus* attaining ten to twelve feet in height, with very large flowers, which continue their bloom through several months; a dwarf horse chesnut or buckeye of fifteen feet in height, and spreading to an equal diameter, producing a profusion of beautiful flowers; and many other productions of equal interest which time will not allow me to enumerate.

In bulbous flowers this country is particularly rich, many of which are very striking and of great beauty and interest, and the balsamic character of very many of the herbaceous plants forms a peculiar feature in that class.

The chanchalagua, so celebrated for its medicinal properties, and of which bunches, in a dry state, are preserved in so many Indian huts, is found in considerable patches, in the moist ravines through which streams occasionally flow from the mountain ranges. Having succeeded in collecting and preserving the seeds and bulbs of above one hundred species of trees and plants, I shall transmit them to Long Island by the first steamer, and then proceed to extend my tour to other sections of California."—*News*.

Swan's Orange Pear.—It gives us great pleasure to record such a favorable notice of this superlative pear as the following, from our correspondent, Gen. Leavenworth, of Syracuse, N. Y. It fully substantiates all we have said in regard to it, and which we now take occasion to *reaffirm*, after two more years have afforded us the opportunity of tasting the fruit. Specimens from Mr. Langworthy's tree in Rochester, kindly sent to us by him in 1848, and this year, have not only been uniformly large and beautiful, weighing 8 or 12 ounces each, but perfectly luscious, and have shown an additional merit it possesses over most pears in its long keeping. Fruit gathered the 6th of September, exhibited three days in Syracuse and four days in Boston, was *perfectly* sound on the 6th of October, thus showing that it has not the defect of most large pears, of rotting at the core.—*Ed*.

"The Swan's Orange, this year, was most excellent,—never better, and merited all you have said of it. It was large and fine, most melting and delicious,—not in the slightest astringent, and possessing an aroma nearly or quite unrivalled. I last week bought a bushel, and this week offered them to a large party of friends, and never did a dish of fruit receive more unqualified praise, or better evidence of its sincerity.—*Truly, yours, E. W. Leavenworth, Syracuse, N. Y., Oct. 11, 1849.*

American Congress of Fruit Growers.—Second session at New York.—The second meeting of the Congress was held in New York at Castle Garden, on Tuesday, the 2d of October, and continued two days.

The meeting was called to order by the President, the Hon. M. P. Wilder, who, with the other officers, hold their office two years, and immediately proceeded to the business of the convention. About eighty delegates were present from various parts of the Union. The secretary

proceeded to examine the credentials of the members present, who answered to their names, and to read letters from various societies appointing delegates.

The president then remarked, that, if there was no objection, the presidents and vice presidents of horticultural societies throughout the country, who might be present, be invited to take a seat with the officers of the Congress.

And, on motion of S. Walker, Esq., it was voted that the same invitation be extended to the president and vice presidents of the North American Pomological Convention.

On motion of Hon. B. V. French, it was voted that any gentlemen present, who were interested in the cultivation of fruits, be invited to take seats in the convention.

A committee of three, consisting of Messrs. Saul, of Newburgh, N. Y., S. H. Colton, of Worcester, Mass., and W. Reid, of New Jersey, was then appointed to receive and report a list of the fruits exhibited before the convention.

Mr. A. J. Downing then moved that a committee of six, with the president, *ex-officio*, be appointed a committee of conference in regard to the union of the North American Pomological Convention and the American Congress of Fruit Growers,—and A. J. Downing, Newburg, S. Walker, Roxbury, Dr. Brincklé, Philadelphia, Dr. Munson, New Haven, and A. McIntosh, Cleaveland, were appointed that committee.

The chairman of the General Fruit Committee, A. J. Downing, then proceeded to lay before the meeting a REJECTED LIST OF FRUITS, and the forenoon was occupied in discussing and disposing of the same. The list, as finally passed, *rejects* over 100 kinds of fruit, mostly pears, but as we have no room to insert it now, we shall do so when the *Proceedings* are published.

A letter was read, from the Pennsylvania Horticultural Society, offering to furnish a hall, &c., provided the convention should accept of their invitation to meet in Philadelphia another year.

The convention then took a recess.

Afternoon Session.—The first business was the report of the committee of conference appointed in the morning, which was read by the president as chairman of that committee.

The committee appointed for the purpose of conferring with the committee sent to the Congress by the North American Pomological Convention, on the propriety and practicability of uniting or consolidating the two associations, respectfully report:—

That, finding the joint committee were fully convinced of the advantage, in all respects, to the country at large, and to the cause of pomology, of having but one national convention of this kind, which should, as far as possible, embody all the talent and experience of the land,—a conviction which this Congress has always firmly held,—they had great pleasure and unanimity in immediately adopting the following resolutions:—

1. *Resolved*, That the conventions hitherto known as the North Ameri-

can Pomological Convention, and the American Congress of Fruit Growers, be hereby consolidated.

2. *Resolved*, That the consolidated association shall hereafter be known as the AMERICAN POMOLOGICAL CONGRESS.

3. *Resolved*, That the next session of the Pomological Congress shall be held at Cincinnati, in the autumn of 1850, and that the time thereof be fixed by the president of this Congress, in conjunction with the president of the Ohio State Board of Agriculture, and that notice of such meeting be given to all agricultural, horticultural, and pomological societies, throughout the country.

4. *Resolved*, That the meetings of this Congress, after the next session, shall take place biennially, and that the meeting for 1852 shall be held at Philadelphia.

All of which is respectfully submitted by the committee.—M. P. W., *Chairman*.

The convention then proceeded to take up the list of fruits recommended by the convention as worthy of GENERAL CULTIVATION, and the afternoon was occupied in discussing the same.

Wednesday Morning.—Mr. Wilder having been under the necessity of returning home, the chair was taken by S. Walker, Esq., of Roxbury, Mass. The discussion upon the list of fruits was continued; and as the whole will be reported, we shall refer to this hereafter, having only room now for the list as finally adopted, which was as follows:—

PEARS.—Rostiezer, Andrews, Fulton, Belle Lucrative, Urbaniste, Bufum, Le Curé, Louise Bonne of Jersey, and Uvedale's St. Germain, (for baking.)

APPLES.—Porter, Hubbardston Nonsuch, Fameuse, Minister, Danvers Winter Sweet, White Seek-no-further, Lady Apple, Wood's Greening, Red Astrachan, Winesap, Wine, Hertfordshire Pearmain, Vandevere, Bullock's Pippin, Swaar.

CHERRY.—Belle Magnifique.

NECTARINES.—Elruge, Early Violet, Downton.

APRICOTS.—Large Early, Breda, Moor Park.

STRAWBERRIES.—Early Virginia, Hovey's Seedling, and Boston Pine.

RASPBERRIES.—Red and White Antwerp, Fastloff, and Franconia.

GRAPES.—Black Hamburg, Black Prince, White Frontignan, Black Frontignan, Grizzly Frontignan, Chasselas of Fontainbleau, Muscat of Alexandria, (under glass); Isabella and Catawba, (open culture.)

GOOSEBERRIES.—Houghton's Seedling, Woodward's Whitesmith, Crown Bob, Red Champagne, Laurel, Ironmonger, Red Warrington, Green Gage, Green Walnut, Early Sulphur.

CURRENTS.—Red Dutch, White Dutch, May's Victoria, Black Naples, and White Grape.

Dr. W. K. Brincklé, C. M. Hovey, R. Manning, P. Barry, and C. Downing, were appointed a committee to examine and report upon seedling fruits.

Mr. A. J. Downing stated that he had a number of state reports handed

in, and it was voted that he should prepare an abstract of them, for publication, under the direction of the officers of the convention.

Dr. Brincklé submitted the report of the committee on seedlings.

After the usual votes of thanks to the president, and to the American Institute, the convention adjourned at 7 o'clock, Wednesday evening.

The meeting was one of much interest; a general good feeling seemed to prevail throughout. All appeared desirous that the two conventions should be harmoniously united; for in their union all the objects of such meetings could be more readily accomplished. We record with pleasure the bringing about this desired result; and henceforth we may predict such results as will satisfy the anticipations of all pomologists.

The display of fruit was very good. There were upwards of forty contributors from various parts of the country.—*Ed.*

ART. III. *Albany and Rensselaer Horticultural Society.*

Annual Exhibition.—The Third Annual Exhibition of the Society came off on Wednesday and Thursday, the 19th and 20th of September, in the Hall of the State Agricultural Society, and far exceeded any former exhibition, not only in the quantity of the fruits, flowers, and vegetables offered for competition, but in their quality, number of varieties newly introduced, and beauty of appearance. The reports of the several committees, which are annexed, indicate sufficiently the extent and richness of the display, without the necessity of further particularising; but I cannot refrain from congratulating the members of the society on the effect of their exertions, and also from hoping that the success of the past season, under unfavorable circumstances, may prove a stimulus to them for future effort.—*Joel Rathbone, President.*

FRUITS.—The committee on fruit report, that there were exhibited by A. Bryant & Son, of Buffalo, twenty-six varieties of pears, for which the committee beg leave to return to Messrs. Bryant the thanks of the society. From J. H. Bayley, Plattsburgh, 13 varieties of apples, including a fine new variety called the Northern Golden Sweet; also 3 var. of plums. From Dr. J. C. Holmes, Detroit, 20 var. of apples. From James Stevenson, Imperial Ottoman, and Green Gage plums. From S. Morgan, 3 var. of apples, 2 of plums, and Seckel pears. From S. E. Warren, Troy, 22 varieties of pears, 15 of plums, and 12 of peaches.

From Henry Vail, Troy, 28 varieties of apples, 37 varieties of pears, and 24 of peaches; among the latter, were five seedlings, one of which, of medium size, light yellowish white color, and red cheek, having delicate flesh, non-adherent to the stone, and well supplied with rich saccharine juice, was decided to be very good, and worthy of further trial; another, of large size, and yellow color, one of medium size, and greenish yellow color, and one of medium size, and yellowish color, with red cheek, as good, and worthy of a

further trial; and a white clingstone, of handsome appearance, unworthy of cultivation. Four varieties of foreign grapes, viz., Black Hamburg, White Hamburg, White Frontignan, and Royal Muscadine; and four varieties of native grapes, viz., Catawba, Isabella, Alexander, and a native, from Connecticut; also, Green Gage plums.

From Dr. H. Wendell, Albany, 29 varieties of pears, among which were the Libérale, Captif St. Helene, Beurré Goubault, Caennais, and some other new sorts; also, 18 varieties of apples, 23 of plums, including the Schenectady Catherine; Isabella grapes, in pots, and four varieties of muskmelons, viz., Christiana, Hampton Court, Persian, and Citron; and two varieties of quinces, viz., Orange or Apple-shaped, and Pear-shaped. From E. P. Prentice, Mount Hope, 28 varieties of apples, 11 var. of peaches, 10 var. of plums, and pears, melons, &c.

From Isaac Denniston, thirty varieties of plums, including nine new seedlings, some of which are of very fine appearance, and may, upon further trial, prove worthy of dissemination, particularly one named by Mr. Denniston the Madison—to designate it—which is of beautiful appearance, good size, and late in ripening—but few specimens being as yet sufficiently mature to test its quality, the committee therefore prefer leaving it for further consideration.

From Joel Rathbone, of Kenwood, seven varieties of grapes, viz., Black Hamburg, Sweet Water, Muscadine, White Frontignan, Horatio, Grizzly Frontignan, and Isabella; Seckel, White Doyenné, and Limon pears; and Gravenstein apples.

From B. B. Kirtland, Greenbush, three varieties of peaches, viz., Red Rarripe, Morris White, and one seedling of medium size, globular form, somewhat flattened at the stem end, yellowish white color, with a beautiful red cheek, rich, tender flesh, adherent to a small-sized stone, well supplied with rich, delicious juice, and well worthy of further trial.

From V. P. Duow, Wolvenhook, 14 varieties of plums, 4 of grapes, and 4 of watermelons. From E. C. McIntosh, 21 varieties of plums, 6 of grapes, and 2 of pears.

Other contributions were from E. Corning, Jr., Albany, F. W. Aiken, Greenbush, Dr. A. March, J. Cary, J. W. Ford, J. D. Thorpe, B. R. Wood, Dr. Ward, Wilson, Thorburn & Teller, Wm. P. Buel, D. J. Wilson, E. E. Platt, J. S. Gould.

PREMIUMS ON FRUIT.

APPLES.—Best and most extensive collection, to H. Vail, Troy, \$3.

Second best, to E. P. Prentice, Mount Hope, \$2.

Best six varieties, to H. Vail, for Fall Pippin, Swaar, Rhode Island Greening, Newtown Pippin, and Esopus Spitzenberg, \$2.

Best one variety, six specimens, to E. P. Prentice, for Rhode Island Greening, \$1.

PEARS.—Best and most extensive collection, to Henry Vail, \$3.

Second best, to Stephen E. Warren, Troy, \$2.

Second most extensive, to Dr. Herman Wendell. (This collection of Dr. W. was more extensive than Mr. Warren's, but had in it a large

proportion of new varieties, with great foreign reputation, but with which the committee were unfamiliar.) \$2.

Best six varieties, to Henry Vail, for Seckel, White Doyenné, Louise Bonne of Jersey, Winter Nelis, Bartlett, and Urbaniste, \$2.

Best one variety, to John S. Gould, for White Doyenné, very beautiful, and equal to this celebrated variety in its palmiest days, \$1.

PLUMS.—Best and most extensive collection, to E. C. McIntosh, \$3.

Second, to Dr. Herman Wendell, \$2.

Best six varieties, to S. E. Warren, for Reine Claude, Jefferson, Hulling's Superb, Washington, Imperial Gage, and Red Magnum Bonum, \$2.

Best one variety, to H. Vail, for Reine Claude, \$1.

As Mr. Denniston's plums were not formally entered early enough for competition, and as they are worthy of great praise, the committee have determined to award Mr. D. three dollars for them, it being one of the largest prizes.

PEACHES.—For the best and most extensive collection, to H. Vail, \$3.

The second, to S. E. Warren, \$2.

The best six varieties, to H. Vail, for Early York, Coolidge's Favorite, Abricotee, Crawford's Early, Red Rareripec, and George the Fourth, \$2.

For the best variety Red Rareripec, to B. B. Kirtland, \$1.

NECTARINES.—The best exhibition, to S. E. Warren, \$3.

GRAPES, FOREIGN.—For the best exhibition, to Joel Rathbone, \$3.

For the best two varieties, to Joel Rathbone, for Black Hamburg and White Frontignan, \$2.

For the best one variety, to H. Vail, for Black Hamburg, \$1.

GRAPES, NATIVE.—Best exhibition, to H. Vail, \$3.

Best two varieties, Catawba and Isabella, to H. Vail, \$2.

Best one variety, Isabella, to H. Vail, \$1.

WATERMELONS.—For the best two varieties, to V. P. Douw, \$2.

For the best one variety Black Spanish, to E. P. Prentice, \$1.

MUSKMELONS.—For the best two varieties, to E. P. Prentice, for Green Citron and Beechwood, \$2.

For the best one variety, to Dr. John Wilson, Bethlehem, for Skillman's Nutmeg.

V. P. Douw, Chairman.

FLOWERS, FLORAL DESIGNS, &c.—The committee on flowers and floral designs beg leave to report, that the exhibition has far exceeded their anticipations in variety of material offered for competition, richness of display and appropriateness of the several designs and floral ornaments. It is exceedingly gratifying to them to perceive the increased interest manifested by residents of both counties in the welfare of the society, and they beg leave to express the hope that the farmers of the vicinity may be induced to give more of their attention, than heretofore, to the cultivation of the finer fruits and flowers, as well as to the introduction of the newly introduced esculents, and also come forward and be active members of the society.

By Joel Rathbone, sixteen varieties of fine verbenas; 5 varieties of rare

dahlias; twenty-five different varieties of cut flowers, as roses, fuchsias, asters, &c. A floral design in candelabrum form, six feet high, on a broad base of green moss, studded with flowers; the sockets of the branches filled with exquisitely arranged petite bouquets of choice flowers, the whole evincing much skill and a fine taste in Col. R.'s gardener. A design in antique form, four feet high, composed of green moss, studded with choice flowers, and having its angles and apex surmounted with beautiful bouquets, tastefully arranged, showing good taste in the gardener.

By D. T. Vail, several varieties of choice dahlias, and other flowers; a beautifully arranged pyramidal design, elevated on a platform, with mossy ground, studded with gay flowers, supported on four square columns, and composed of choice roses, dahlias, verbenas, heliotropeums, surmounted by an exquisite bouquet of rare greenhouse flowers. A rustic cottage of moss, studded with white and red amaranths, and altogether arranged with much skill; both of the above being very creditable to John Quinn, Mr. Vail's gardener.

By Dr. H. Wendell, twenty-seven varieties of phloxes; 27 varieties of seedling verbenas; 40 varieties of new seedling phloxes, some of which were very beautiful. A design representing a temple of Flora, of circular form, supported by four massive pillars, surmounted by a dome, and elevated on a raised platform; the groundwork of the whole of green moss, studded with choice and delicate flowers; the ceiling of the temple of small flowers, arranged in the form of a star, on a moss ground. A floral design in shield-like form, covered with dahlias, roses, asters, verbenas, and other flowers; and a basket bouquet composed of choice flowers, exquisitely arranged. The above designs and basket were made by Mathias Tillman, Dr. W.'s gardener.

Other contributors of flowers, &c., were Wilson, Thorburn & Teller, W. Newcomb, (who sent 60 varieties of dahlias,) V. W. Douw, L. Menand, E. P. Prentice, J. Dingwall, and Mrs. Brinkerhoff.

PREMIUMS ON FLOWERS.

PLANTS.—For the best six, growing in pots, to L. Menand, \$2.

DAHLIAS.—For the best display, to Mr. Newcomb, \$3.

Best twelve dissimilar blooms, to J. Wilson, for Constantia, Orlando, Lutea Alba, Golden Rule, Cheltenham Queen, McKensie's Perfection, Lady Ann Murray, Minerva, Caleb Cope, Tippecanoe, La Belle Blonde, and Marquis of Aylesbury, \$2.

For the best six, to Wm. Newcomb, \$1.

For the best flower—specimen bloom—to D. T. Vail, for Beauty of Sussex, \$1.

ROSES.—For the best ten varieties, including Hardy Perpetuals and Isle de Bourbons, to J. Wilson, for Souvenir de la Malmaison, Dr. Roques, Mrs. Elliott, Madam Fabert, Eugene Joviene, Crimson Globe, Eugene Hardy, Emilie Courtier, Giant de Battelles, and Phoenix, \$2.

For the best six varieties, to J. Wilson, \$1.

PHLOXES.—For the best ten varieties, to Dr. Herman Wendell, for Anais

Chauviere, Eclipse, Reine de Jour, Superbissima, Dodonia, Rosea Superba, Blanc de Neuilly, Mazeppa, Auguste, and Princess Marianne, \$2.

For the best six varieties, to Dr. H. Wendell.

For the best seedling, to J. Wilson, for a beautiful flower of fine habit and form, its petals being of large size, and of variegated white and pink, \$1.

GERMAN ASTERS.—For the best display, to Wm. Newcomb, \$1.

For the second best, to J. Wilson, \$1.

VERBENAS.—For the best twelve dissimilar blooms, to J. Wilson, \$2.

For the best six, to James Dingwall, for Beauty Supreme, Eclipse, Roseum, Breill's New Purple, New Fulgens, and Suzette, \$1.

For the best seedling, to J. Dingwall, \$1.

ROUND VASE BOUQUET.—For centre table, for the best, to J. Dingwall, \$2.

FLAT PARLOR BOUQUET.—For mantle vase, for the best, to Wm. Newcomb, \$2.

HAND BOUQUET.—Best and most beautiful round one, to J. Wilson, \$1.

Best and most beautiful flat one, to J. Wilson, \$1.

BASKET BOUQUET.—Best and most beautiful, with handle, to Dr. H. Wendell, \$2.

FLORAL DESIGNS.—Best, and most beautiful, and most appropriate, to Joel Rathbone, \$3.

Second best, to D. H. Wendell, \$2.

Third best, to D. Thomas Vail, \$1.

For the committee, *Stephen E. Warren, Chairman.*

VEGETABLES.—The committee report, that they were highly gratified with the very fine specimens shown in this department, and also by the interest shown to obtain the prizes offered. The committee regret that the room in which the exhibition was held, had not been large, so as to afford to the visitors a fairer view of the very many numerous and new varieties of esculents, which the gardeners of this vicinity are in the habit of raising.

From Dr. H. Wendell, of Albany, twenty varieties of Seedling potatoes. Many of these seedlings appear to be remarkably fine, and the committee think the exhibitor deserves high praise for his commendable efforts to improve this valuable tuber; they would suggest that the most promising of these new kinds be further tested, and that their qualities be reported on next season.

There were several other contributors, but we have not space to enumerate them.

PREMIUMS ON VEGETABLES.

To Dr. H. Wendell, for the best new Seedling potatoes, \$2.

Dr. J. Wilson, half peck of Winter potatoes, \$1.

E. P. Prentice, for the best Winter squashes, \$1.

John S. Gould, of Albany, Blood beets, \$1.

E. P. Prentice, for the best carrots, \$1.

E. P. Prentice, for the best parsnips, \$1.

- J. Rathbone, of Kenwood, for the best egg plants, \$1.
Dr. H. Wendell, for the best Winter cabbage, \$1.
J. S. Gould, for the best cauliflowers, \$2.
V. P. Douw, Wolvenhook, for the best celery, \$1.
Wm. Newcomb, Pittstown, for the best Martynias, \$1.
J. S. Gould, for the best tomatoes, \$1.
E. P. Prentice, for the most numerous varieties of tomatoes, \$1.
J. Rathbone, for the best specimens of Okra, \$1.

DISCRETIONARY PREMIUMS.

- To Dr. H. Wendell, for the finest exhibition of vegetables, \$2.
Dr. J. Wilson, for his assortment of beans, \$1.
E. Corning, Jr., for a very large and fine Mammoth squash, \$1.
For the committee, R. F. Johnstone, Chairman.

ART. IV. *Massachusetts Horticultural Society.*

Saturday, Sept. 22d, 1849.—An adjourned meeting of the Society was held to-day,—the President in the chair.

Voted, That the sum of twenty-five dollars be paid by the treasurer to Mr. D. Haggerston for service rendered during the exhibition.

Voted, That a committee of three be appointed by the chair to nominate a list of officers, professors, and committees, for the coming year, and report at the next meeting, and J. Lovett, 2d, D. Haggerston, and E. M. Richards, were appointed that committee.

Complaint having been made by members and others, contributors to the annual exhibition, of the loss of their contributions,

Voted, That a committee of three be appointed by the chair to take into consideration what means can be adopted to prevent the occurrence of the loss of contributions for the future, and Messrs. J. Breck, D. Haggerston, and R. M. Copeland, were appointed that committee.

Voted, That the society loan to the Norfolk Agricultural Society such of their glassware as they may wish to use at their annual exhibition, the Norfolk Agricultural Society paying all the expense of transportation, labor, breakage, &c.

Adjourned one week to September 29th.

Sept. 29th.—An adjourned meeting of the Society was held to-day,—the President in the chair.

The committee appointed at the last meeting to nominate a list of officers, &c., for the coming year, reported, and their report was referred back to make a few alterations in consequence of the resignation of nominees.

The committee appointed to investigate the loss sustained by various members and others, of their contributions at the annual exhibition, reported that they had not been able to discover the transgressors, and recommend the appointment of a committee to take charge of contributions for

the future, and the expulsion of any member who may be found guilty of so mean and contemptible an act as taking articles not belonging to him, and the discharge of any person in their employ who may be found to be so guilty.

C. M. Hovey, chairman of the committee appointed to prepare and present to the Hon. H. A. S. Dearborn, the Society's Gold Medal, as a mark of esteem for his eminent services while President of the Society, submitted the following correspondence:—

DEAR SIR,—Agreeably to a vote of the Massachusetts Horticultural Society, passed at the annual meeting, January 6, 1849, a copy of which is enclosed, we now, in accordance with that vote, have the pleasure of presenting you with the Society's Gold Medal.

Many years have passed away since you presided at the head of our association; when your zeal in the cause of horticultural science;—your untiring exertions to render popular the pleasing pursuit to which it is especially devoted;—your arduous labors while guiding its affairs in the infancy of its organization, and your extensive correspondence with gentlemen of science in every country and clime, gave to the Society a standing and position which has since caused it to be looked upon as the parent association of our country.

As a small, but not the less earnest tribute to your labors, as the first President of the Society, at a period when, in addition to its horticultural affairs, that noble monument of your devotion to its interests, Mount Auburn Cemetery was projected, we now present you with the Society's Gold Medal, and beg your acceptance of the same.

With the assurance of our best wishes for your health and prosperity, we have the honor, dear sir, respectfully yours,

C. M. HOVEY, CHEEVER NEWHALL, E. M. RICHARDS, *Committee.*

Boston, Sept. 25th, 1849.

To the Hon. H. A. S. Dearborn, Roxbury, Mass.

Hawthorn Cottage, Roxbury, Sept. 28th, 1849.

GENTLEMEN,—This afternoon I received, with great pleasure, your very kind letter and the beautiful gold medal, which the Massachusetts Horticultural Society has so generously conferred upon me; and I request that you will do me the favor of presenting my grateful acknowledgements to the members of that important institution for the honor they have done me. I deeply regret, however, that my humble efforts to promote one of the most interesting branches of rural industry have not been more worthy of such distinguished consideration and so precious a reward.

For the very favorable manner in which you have been pleased to estimate the very limited services I have attempted to render my fellow-citizens who are interested in the various departments of useful and ornamental cultivation, I offer my sincere thanks.

With the most ardent aspirations for the prosperity of the Society, and your individual happiness, I have the honor of being, gentlemen, your much obliged and most obedient servant,

H. A. S. DEARBORN.

C. M. Hovey, Cheever Newhall, E. M. Richards, Esqrs., *Committee.*

Meeting dissolved.

Exhibited.—**FLOWERS:** The exhibition of dahlias for premiums took place to-day, and the display was one of the finest for several years. Not only were the flowers of the most perfect character, but they were shown in great numbers, notwithstanding the dry weather of June and July. Indeed we may truly say, such fine blooms were never seen in the Society's hall; and their great beauty seemed to revive anew the taste for the culti-

vation of this most gorgeous flower, which, notwithstanding what is said about the uncertainty of its blooming, &c., is, after all, *the* Gem of the autumnal garden.

The principal exhibitors were J. W. Brown, L. Davenport, H. K. Moore, Breck & Co., James Nugent, T. Needham, A. Bowditch, E. Wight, C. A. Hewens, J. Hovey, Messrs. Winship, R. W. Ames, H. Vandine, P. Barnes, and Hovey & Co., who exhibited nearly 300 blooms.

Dr. D. Wood, Dighton, exhibited a few fine *ericas*, and Mr. Davenport sent a beautiful collection of cut roses.

PREMIUMS AND GRATUITIES AWARDED.

DAHLIAS.—In divisions and classes as follows:—

DIVISION A.

PREMIUM PRIZE.—To Messrs. Hovey & Co., for the best twelve dissimilar blooms, the Society's silver medal, \$5:—for Miss Vyse, Madame Wachy, Mrs. Shaw Le Fevre, Beeswing, Louis Philippe, Admiral Stopford, Pauline Rosenfeld, Golden Souvenir, Mont Blanc, Marquis of Aylesbury, Essex Rosy Lilac, and Victorine.

SPECIMEN BLOOM.—To L. Davenport, \$3, for Beeswing.

SPECIMEN BLOOMS OF VARIOUS COLORS.—*Best Yellow*, to T. Needham, \$1 00, for Cleopatra; *Orange*, to I. Spear, \$1 00, for Latour L'Auvergne; *Purple*, to J. Nugent, \$1 00, for Caleb Cope; *Claret*, to Hovey & Co., \$1 00, for Marquis of Aylesbury; *Maroon*, to Hovey & Co., \$1 00, for Louis Philippe; *Dark*, to T. Needham, \$1 00, for Admiral Stopford; *White*, to Hovey & Co., \$1 00, for Miss Sarah; *Tipped*, to L. Davenport, \$1 00, for Miss Vyse; *Pink*, to L. Davenport, \$1 00, for Dowager Lady Cooper.

DIVISION B.

CLASS I.—To Hovey & Co., for the best twenty-four blooms, \$8 00, for Remembrancer, Mimosa, Constantia, Henry Clay, Stern Von Bramschweig, Essex Rosy Lilac, Duke of York, Pauline Rosenfeld, Victorine, Lady of the Lake, Beauty of Hants, Admiral Stopford, Miss Vyse, Madam Wachy, Louis Philippe, Mrs. Hovey, Essex Triumph, Berryer, Minn, Baron Frettan, Golden Souvenir, Ithuriel, Sunbeam, Hermione.

To J. W. Brown, for the second best, \$6 00, for Princess Radziville, Victorine, Madame Wachy, Coquette, Marquis of Aylesbury, Lady of the Lake, Pauline Rosenfeld, Miss Vyse, Roi de Pontelles, Antagonist, Cleopatra, Hoffgartner Meyer, Admiral Stopford, Baron Frettan, Remembrancer, Gloria Mundi, Hoffgartner Morsch, Andromeda, Constantia, Berryer, Minn, Mont Blanc, Viscount Resseigneur, Hamlet.

CLASS II.—To L. Davenport, \$6 00 for the best eighteen dissimilar blooms, for Cleopatra, Isis, Beeswing, La Polka, Model, Fulwood Hero, Duchess of St. Albans, Queen of Roses, Madam Walner, Dodd's Prince of Wales, Dowager Lady Cooper, Miss Vyse, Marchioness of Cornwallis, Roi de Pontelles, Princess Alice, Athelete, Constantia, Indispensable White.

To J. Breck & Co., \$4 00, for the second best, for Antagonist, Alfred,

Pickwick, Fire King, Cleopatra, Nonpareil, Prince of Wales, (Girling's) Bridesmaid, Marquis of Aylesbury, Arethusa, Privateer, Queen of Roses, Charles XII, Duchess of St. Albans, Ansell's Unique, Northern Beauty, Marshal Soult, Constantia.

CLASS III.—To H. K. Moore, \$5, for the best twelve dissimilar blooms, for Picotee, Indispensable White, Latour l'Auvergne, Beeswing, Jenny Lind, Queen of May, La Polka, Queen of the French, Cleopatra, Caleb Cope, Marchioness of Cornwallis, Marquis of Aylesbury.

To J. Nugent, \$3 00, for the second best, for Beeswing, Constantia, Cleopatra, Indispensable White, Lady Harland, Hero of Stonehenge, Sir Frederick Johnson, Caleb Cope, Charles XII, Louis Philippe, Miss Vyse, Fire King.

GRATUITIES.—To Dr. D. Wood, for fine ericas, \$2.

To L. Davenport, J. Nugent, J. Hovey, A. Bowditch, and Hovey & Co., \$1 each for dahlias, &c.

FRUIT: From J. F. Allen, twenty-two varieties of grapes, also figs and Seckel pears. From T. Needham, six varieties of grapes, among them a fine cluster of the Cannon Hall Muscat. From Hovey & Co., Diana grapes and Colmar d'Ete pears. From G. Merriam, four varieties of peaches, all fine. From O. Johnson, five varieties of pears and Muscat of Alexandria grapes. From H. Vandine, very fine Coe's Golden Drop plums. Persimmons and medlars from Messrs. Winship. From J. J. Low, Payency pears. From Mrs. Nichols, sweet apples.

Oct. 6.—The stated quarterly meeting of the Society was held to-day,—C. Newhall, Vice President, in the chair.

The annual election of officers, for the ensuing year, took place, and the following gentlemen were elected:—

President—Samuel Walker.

Vice Presidents—B. V. French, C. Newhall, E. M. Richards, J. S. Cabot.

Treasurer—William R. Austin.

Corresponding Secretary—Eben Wight.

Recording Secretary—E. C. R. Walker.

Professor of Botany and Vegetable Physiology—J. L. Russell, A. M.

Professor of Entomology—T. W. Harris, M. D.

Professor of Horticultural Chemistry—E. N. Horsford.

STANDING COMMITTEES.

On Fruits—J. S. Cabot, Chairman: Eben Wight, Josiah Lovett, 2d, J. Breck, R. Manning, G. R. Russell, C. M. Hovey.

On Flowers—D. Haggerston, Chairman: A. McLennan, W. B. Richards, E. A. Story, L. F. Winship, E. C. R. Walker, P. Barnes.

On Vegetables—A. D. Williams, Jr., Chairman: W. B. Kingsbury, J. Nugent, A. Bowditch, A. D. Weld, S. W. Cole, G. Pierce.

On Library—C. M. Hovey, Chairman: H. W. Dutton, J. Breck, J. Owen. R. M. Copeland, Librarian.

On Synonymes of Fruit—M. P. Wilder, Chairman: P. B. Hovey, Jr., R. Manning, J. Lovett, J. S. Cabot.

Executive Committee—S. Walker, Chairman: W. R. Austin, M. P. Wilder, E. M. Richards, O. Johnson.

For establishing Premiums—J. S. Cabot, Chairman: D. Haggerston, A. D. Williams, Jr., J. Lovett, P. B. Hovey, Jr.

On Finance—M. P. Wilder, Chairman: J. Stickney, O. Johnson.

Of Publication—E. Wight, Chairman: J. Lovett, J. Breck, E. C. R. Walker, J. S. Cabot, D. Haggerston, A. D. Williams, Jr.

A copy of the Annual Report of the Commissioner on Patents was received from Hon. R. C. Winthrop, and the thanks of the Society were presented to Mr. Winthrop.

Daniel Denny, of Boston, was elected a member of the Society.

Adjourned one week to October 13th.

Exhibited.—Flowers: Dahlias, in variety, from M. P. Wilder, S. Sweetser, J. Nugent, T. Needham, and others. Dahlias and a fine lot of roses from Lewis Davenport.

FRUIT: The exhibition of fruits to-day was very fine. The grapes were numerous, and these, together with the pears and peaches, embraced superior specimens. From T. Needham, Black Hamburg, White Frontignan, Syrian, and Black Frankendal grapes, all fine. From L. B. Comins, six dishes Isabella grapes, finely colored, and well ripened. From J. F. Allen, Black Hamburg grapes; three dishes superior pears—Urbaniste, Beurré Bosc, and Napoleon. From J. Hill, native grapes. From J. Dane, Calabasse Bosc (?), Napoleon, fine, Louise Bonne of Jersey pears, very fine. From O. Johnson, Ribston Pippin apples, fine. From G. Merriam, Crawford's Late, Bergen's Yellow peaches, and a Seedling. From O. Everett, quinces, very fine.

Oct. 13th.—An adjourned meeting of the Society was held to-day,—the President in the chair.

Mr. J. Owen submitted a preamble and resolutions in regard to the formation of an Experimental Garden, and it was, on motion of Cheever Newhall,

Voted, That a committee of five be appointed by the chair to take the subject into consideration and report at a future meeting, and Messrs. C. Newhall, J. Owen, M. P. Wilder, B. V. French, and J. S. Cabot were appointed the committee.

Voted, That for the future, whenever exhibitions take place in the Library Room, the exhibitors be allowed to remove their contributions at 12 o'clock.

. On motion of C. M. Hovey, it was

Voted, That a committee of five be appointed to take into consideration what measures, if any, should be adopted relative to the exhibitions of the coming year, and to report at the annual meeting in January, 1850, and that the president be chairman of that committee.—The committee was filled by the appointment of C. M. Hovey, D. Haggerston, J. Breck, and J. Lovett.

AWARD OF PREMIUMS ON FLOWERS.

The Committee on Flowers announced the following premiums:—

HERBACEOUS PLANTS.—For the best display through the season, the Society's silver medal, to J. Breck & Co., \$5.

For the second best, Parker Barnes, \$4.

For the third best, Messrs. Winship, \$3.

ANNUALS.—For the best display through the season, the Society's silver medal, to J. Breck & Co., \$5.

For the second best, to Parker Barnes, \$4.

For the third best, to A. Bowditch, \$3.

SHRUBBY PLANTS.—For the best display through the season, the first prize to Messrs. Winship, \$5.

For the second best, to John A. Kenrick, \$4.

For the third best, to William Kenrick, \$3.

RHODODENDRONS.—For the best display of the season, the first prize, to Hovey & Co., \$3.

The second, not awarded.

Exhibited.—**FRUIT:** From F. Tudor, Esq., from his garden at Nahant, pears—Louise Bonne of Jersey, superior; Beurré Goubault, very fine; Duchesse d'Angouleme, and Chaumontelle, superior; Brown Beurré, fair and very fine. The specimens of the Louise Bonne, twelve in number, were the most splendid we ever saw, being enormously large, very fair, and well colored. The following note accompanied the fruit:—

Louise Bonne of Jersey, of Nahant growth.—This fruit is the largest in the basket, measures a fraction short of 10½ inches,—weight, a fraction less than 13½ oz.

The whole circumference of 10 fruits in this basket is 8 feet 1½ inches,—weight of the same, 7 lbs. 4½ oz. They are the ten best fruits of a dwarf tree, producing, in all, 95 fruits, stimulated with rain water, to which is to be attributed the size of the fruit in a dry summer. All the other fruits were large, and many of them injured by being blown off by the storm of the 7th October.

From A. W. Haven, Flemish Beauty pears, very large. From Joseph Bennet, Colmar d'Aremberg pears. From O. Johnson, White Doyenné and Urbaniste pears; quinces, superior; apples. From J. F. Allen, Golden nectarines; St. Michael figs; Black Hamburg, very fine, Rose Chasselas, White Frontignan, and Golden Chasselas grapes, very fine. From C. E. Grant, Isabella grapes, 6 dishes, well colored, well ripened, and sweet, superior. From T. Needham, Black Frankendale, Black Hamburg, White Frontignan, Muscat of Alexandria, and Syrian grapes, all very fine. From F. King, Coe's Golden Drop plums, superior.

From Hovey & Co., Semiana plums; Diana grapes; Knight's Monarch very fine, Excellantissima, Belle Epine Dumas, Hull, Forelle, Duc de Bordeaux pears. The Diana grapes were tasted by the committee, who make the following remark:—"Bears abundantly, and certain to ripen. This grape is, in the opinion of the committee, the best suited to out-door culture in New England of any they have tested." From J. Bliss, Baldwin, Ribaton Pippin apples, and three other sorts,—one of them a very large, handsome apple, of fine quality. From J. Washburn, Pear quinces;

also Seedling apple quinces, very fine. From B. H. Dewing, quinces, very fine. From W. Bacon, quinces, very large. Apples, from Elisha Tower; seedling raised by J. F. Fay, Northboro', a good sized, handsome red apple, of very good quality.

Oct. 20th.—Exhibited.—**FRUITS:** From the President of the Society, Swan's Orange and Monarch pears. From J. F. Allen, three varieties of grapes, Golden nectarines, and fine Urbaniste and White Doyenné pears. From Jos. Stickney, Beurré Diel, Brown Beurré, and Van Mons Leon le Clerc pears. From John Washburn, Swan's Orange pears, and fine quinces. Isabella grapes, from J. Richardson. From E. Cleaves, Salem, a basket of very fine Beurré Bosc pears. From H. Vandine, fine Marie Louise pears. Splendid specimens of White Doyenné pears from H. Plympton, Boston,—these were as perfect as could be produced; also, Isabella grapes. From B. D. Emerson, Black Hamburg grapes. From Jas. Munroe, Urbaniste pears. From A. Bowditch, White Doyenné and Monarch pears. From W. Sargent, fine Buffum pears. Fruit of the Osage Orange, from W. Kenrick. From Jos. Bird, White Doyenné pears.

Oct. 27th.—Exhibited.—**FRUITS:** From W. C. Strong, four kinds of grapes, all fine. From B. D. Emerson, Black Hamburg grapes, very superb berries, but not highly colored. From W. W. Merrill, Boston, White Doyenné pears, very fine. From A. W. Haven, very fine Flemish Beauty, Seckel, and Napoleon pears. From J. S. Cabot, Waterloo and Colmar du Lot pears. From C. E. Grant, Isabella, very fine, and Black Hamburg grapes, open culture.

From O. Johnson, a basket of very fine Duchesse d'Angouleme pears. From A. W. Stetson, Isabella and Catawba grapes. From Hovey & Co., Diana grapes and Excellentissima pears. From J. Lovett, Vicompte de Spoelberch pears, and Drap d'Or and Seedling apples. From S. Leeds, Duchesse d'Angouleme and Passe Colmar pears, the last a very large specimen. From M. H. Simpson, two apples without name, one of them a fine sweet apple. Pears without name, from S. Downer, Jr., Geo. Wilson, and T. J. Vinton. Grapes from Geo. Walsh and H. Vandine.

The committee pronounced the Diana grapes well ripened and fine. Excellentissima pear, fine: Vicompte de Spoelberch pear, fine; Drap d'Or apple, very fine.

AWARD OF PREMIUMS ON FRUITS.

FOREIGN GRAPES, (after July 1.)—For the best specimens, (Black Hamburg,) to B. D. Emerson, \$10.

For the second best, (Muscat of Alexandria,) to Hovey & Co., \$7.

NATIVE GRAPES.—For the best specimens, (Diana,) to Hovey & Co., \$5.

For the second best, (Isabella,) to C. E. Grant, \$3.

NECTARINES.—For the best twelve specimens, to J. F. Allen, \$6.

For the second best, to W. D. Strong, \$4.

PEACHES, (open culture.)—For the best twelve specimens, to G. Merriam, \$6.

For the second best, to ———, \$4.

PLUMS.—For the best specimens, (Green Gage,) to O. Johnson, \$6.

For the second best, (Coe's Golden Drop,) to E. King, \$3.

ART. V. *Answers to Correspondents.*

BEST GRAPES FOR A COLD VINERY. *M. C. Johnson.*—The best grapes for your house, which will contain *twenty-four* vines, as you say you do not wish for a great variety, are the following :—

Black Hamburg, 8 vines ; Black Hamburg, Wilmot's No. 16, 2 ; Black Hamburg, Wilmot's, 2 ; Black Prince, 2 ; White Frontignan, 2 ; Grizzly Frontignan, 2 ; Chasselas of Fontainebleau, 2 ; White Nice, 2 ; Muscat of Alexandria, 2.

The St. Alban's grape can be had.

BEST FIG UNDER GLASS. *M. C. Johnson.*—We think the Black fig of St. Michael's one of the best for this purpose. This we have seen tried and it does well. Others may do as well,—the Brown Turkey, Black Ischia, and White Marseilles, are all excellent kinds.

TWELVE FINE ROSES FOR WINTER BLOOMING. *A lover of Roses.*—Twelve fine sorts, for this purpose, are the following :—*Tea*, Soffrano, Bougere, Elize Sauvage ; *China*, Cramoise superieure, Fabvier ; *Noisette*, Solitaire, Lamarque ; *Perpetual*, La Reine, Comtesse Duchatel ; *Bourbon*, Hermosa, Souvenir de la Malmaison, Paul Joseph. These twelve would give a good variety and abundant bloom.

APRICOTS UNDER GLASS. *M. C. Johnson.*—The apricots you wish to plant along the centre of a span-roofed vinery, as espaliers would do probably as well as other fruit trees, and a very good crop might be obtained, if well managed. Success will depend something upon the management of the vines ; they should not be allowed to shade too much. Plum trees trained in this way, in the vinery of Mr. Strong, of Brighton, produce a fair crop of handsome fruit.

TWELVE BEST DAHLIAS OF 1849. *An Amateur.*—The exhibitions of the year have just closed, and if you wish to select your roots now, the following will give you a fine collection for a small one :—Miss Vyse, Louis Philippe, Mont Blanc, Yellow Standard, Toison d'or, Boulé de Feu ; *Fancy*, Madam Wachy, Mrs. Shaw Le Fevre, Mimosa, Emperor de Maroc, Sunbeam, Rainbow.

ART. VI. *Obituary.*

DEATH OF REV. HENRY COLMAN.—The death of Mr. Colman took place at Islington, near London, on the 17th of August last, after a brief illness of only a week or two, at the age of 65 years. The event has already been generally announced, and we record his decease that we may have the opportunity to speak of his valuable services in the cause of agricultural and rural improvement.

Mr. Colman has, for the last fifteen years, devoted his attention to the interests of agriculture. He was educated for the ministry, and discharged the duties of his profession in Salem, where he was settled over the Essex Street Church for several years. But his love for agricultural pursuits induced him to resign his ministerial labors, and he removed to Deerfield,

Mass., where he occupied a large farm, and became a constant contributor to the few agricultural papers then published.

In 1838 he was appointed, by Gov. Everett, agricultural commissioner for the State of Massachusetts, and devoted his attention to the duties of the office until it was abolished in 1842, completing, in that period, three reports, extending to more than 1,000 pages. During the latter part of this time he also assisted as editor of the *New England Farmer*. In 1842 he visited Western New York, and made arrangements to take charge of the *New Genessee Farmer*, which duty he discharged for a year or more, when he made arrangements for his European agricultural tour.

Mr. Colman's *Agricultural Reports*, as well as the several numbers which comprise his two volumes of *European Agriculture*, have all been reviewed in our pages, and it is unnecessary for us to say how greatly they have contributed to the advancement of agricultural science throughout the country. His last "Familiar Letters" we have not had the leisure to read. In his death, agriculture loses one of its most devoted friends.

HORTICULTURAL MEMORANDA

FOR NOVEMBER.

FRUIT DEPARTMENT.

Grape Vines, in the greenhouse, or vinery, will now have lost their leaves, and the wood will be ripening rapidly. Continue to air the house freely in all good weather. In cold houses, where the crop yet remains on the vines, the houses should be kept cool and dry, giving air liberally in fine weather, and closing up rather early. Vines in pots should not be exposed to frost unless the wood is well ripened. Hardy grapes in the open air may now be pruned, as about all the wood worth retaining for next year's bearing will be ripe. All that is green should be cut away, and, where necessary, the ripe wood shortened back.

Strawberry beds should be protected with a light covering of coarse strawy manure or leaves.

Raspberry plantations should be protected in like manner, or by earthing over the canes.

Peach trees in pots should be wintered in a warm shed or cool cellar, where the earth will not freeze sufficiently to endanger the breaking of the pots.

Fig trees, in pots, should be protected in a similar place to that recommended for peach trees. Under the stage of a greenhouse is a very good place.

Fruit trees, of all kinds, may be more safely transplanted now than at any season of the year. Protect newly planted ones, as well as those already established, with a wheelbarrow of good manure, (or compost, if no manure,) to each tree. Seedling pears, plums, quinces, &c., should also be protected with a thin covering of manure.

Cherry, pear, apple, quince, and other fruit tree seeds, may be planted this month, selecting a good soil in a situation not too moist.

FLOWER DEPARTMENT.

Dahlias, if not already taken up, should be looked after before severe frost. If there is not leisure to attend to it immediately, the roots should be slightly earthed over. Take up in dry weather, and place the roots away from all danger of frost.

Pelargoniums should now be repotted and kept in the coolest part of the greenhouse.

Camellias should be put in order for the winter by carefully washing the leaves, top-dressing the pots, and neatly staking up the plants. Water liberally and syringe in good weather. Seeds may be planted now.

Lilies of all the hardy kinds should be planted during the month.

Gladioluses should be taken up before hard frost.

Ixias, *Sparaxis*, and other Cape bulbs, should now be planted.

Carnations and *picotees* should be put into frames and protected in severe weather.

Tulip and *hyacinth* planting should be completed this month.

Pæonies, of all kinds, may be safely transplanted this month.

Verbenas for early blooming should now be shifted into larger pots. Cuttings for a succession may now be put in.

Roses of some hardy kinds will need protection. The Bourbons, Hardy perpetuals, and Noisettes, if standing in a dry subsoil, with a few inches of covering, will stand the winter well. Some of the mosses flower better by bending down the tops and throwing over a slight covering of coarse manure. Prairie roses in very cold situations do better to peg the strong shoots down to the soil, so that they may be covered by the snows of winter. All the kinds are not equally hardy.

Chinese primroses may now be shifted again into larger pots.

Herbaceous plants may yet be removed with safety. Before severe frost, they should have a little covering of leaves or decayed manure thrown over them.

Oxalises may yet be potted for a succession.

Erythrina crista galli should now be taken up and wintered in the cellar or greenhouse, out of danger of frost.

Pansies, in beds, should have a covering of very old manure or leaf mould.

Double Helianthus should be taken up and wintered in the cellar.

Cyclamens may now be shifted into larger pots, if they require it.

Half-hardy plants, in pots, may be successfully wintered in frames, where many of them do better than in the greenhouse.

Napoleitan violets may yet be set out in frames, if not already done.

Greenhouse plants, of all kinds, will now require attention. The pots should be washed clean, the soil top-dressed and all kinds of insects destroyed. Nothing adds so much to the attractiveness of a collection of plants as cleanliness.

THE MAGAZINE OF HORTICULTURE.

DECEMBER, 1849.

ORIGINAL COMMUNICATIONS.

ART. I. *Notes of a Visit to Oatlands, Hempstead, L. I., N. Y., the residence of D. F. Manice, Esq.* By the EDITOR.

OATLANDS, the residence of Mr. Manice, is situated on the main road from Brooklyn to Hempstead, about four miles from Jamaica, and less than a mile from the station of the Long Island Railroad at Brushville. The location is on a level plain, without prospect, and has but few natural advantages for a country residence. The soil is also light, and rather sandy, and consequently not so well adapted to all descriptions of trees and shrubs, as most places of similar extent; but, to make up for the absence of all these, the proprietor has brought to his assistance all the means and appliances of taste and art, and has thus made his residence, saving one thing, a commanding prospect, all that could be desired, and more than many, far better located, can claim.

The grounds extend over fifty-six acres, eighteen of which are covered with a natural and dense growth of oaks, ashes, elms, &c., which have been judiciously thinned out, and now form a fine park, in the rear of the house. The remainder, including the flower garden, orchard, pleasure ground, &c., is grass and tillage land. The house is a handsome building, in a kind of castellated gothic, standing about fifty feet from the road, with the conservatory and hothouse, and flower garden on the left,—the kitchen garden and forcing-houses on the right,—and the lawn and pleasure ground, in the rear of the house, separating it from the park. The approach is

to the right, through an avenue hedged with privet, and bordered with ornamental trees.

Our visit was somewhat hurried,—but, in the brief time we were allowed to make the circuit of the place, we noted down many things, though far less than we could have wished; for Mr. Manice is an enthusiastic admirer of plants and trees, and has gathered within his extensive grounds a rare collection of plants, a choice assortment of fruit trees, and many of the beautiful ornamental trees and shrubs of recent introduction to notice; sparing no pains to possess every thing which could add to the interest or beauty of his residence.

The hothouse is about forty feet long and twenty wide, with a span roof, and stands about twenty feet from the house. The conservatory is a large and lofty building, sixty feet by thirty, and fourteen feet to the eaves, with a span roof. The interior arrangements are a narrow border on the sides and ends, with a broad walk all round, and a large paved bed in the centre, on which the plants are placed. The conservatory and stove are both heated with a powerful hot-water apparatus, by which a good temperature is easily obtained, though so many cubic feet of air are to be warmed. The conservatory connects with the stove, transversely, from which it is entered at one end, opening at the other to the flower garden.

The stove, at this early season, (Oct. 8,) had scarcely been arranged for the winter, and but few specimens were yet in bloom. The collection contains several of the Orchidaceæ, a few only of which were in flower, but they were all in good health, under the care of the gardener, Mr. Parnell, and gave evidence of good bloom during the ensuing spring and summer. We here saw a fine specimen of the lovely *Gardénia Stanleyana* in flower, a plant we have already noticed, (Vol. XII, p. 28,) but which we had never seen in bloom. It is even more beautiful than the representation of it in the *Botanical Register*. It is, undoubtedly, the finest plant in the country. *Gongora atropurpurea*, *Stanhopea insignis*, *Cattleya crispa* and *Cyrtoceras reflexa*, the last in bloom, were some of the best orchids. Fine specimens of *Statis macrophylla*, *Clerodendron splendens*, *Napoleon imperialis*, and many others equally rare, made part of the stove collection.

The conservatory contained some very large and handsome camellias, acacias, &c. Two plants, of historical as well as floral interest, were fine orange trees, formerly belonging to Robert Morris, and of such size that one of them has yielded more than *two hundred* fine fruit in one year;—they were yet in excellent health, and well-shaped trees. The citron has fruited with Mr. Manice, and one specimen weighed 3lb. 1½ oz. *Psidium Cattleianum*, a very fine specimen, nearly ten feet high; a nice plant of that most desirable and elegant plant *Céstrum aurantiacum*, whose rich apricot colored blossoms, profusely covering the branches in dense spikes, is one of the finest acquisitions to the greenhouse, blooming in October and November, when there is so little in flower. On the shelves the much talked about, much abused, and rather too much praised, *Plumbago Larpéntæ* was in flower; the color of its blossoms renders it ornamental, but it has rather a shabby habit which detracts from its beauty. *Mandevillea suavéolens*, that beautiful climber, too little known and too seldom seen, had reached the top of the house, and hung its festoons of white, fragrant, bell-shaped flowers in such profusion as to perfume the air with their odor. All the climbing plants are growing in the border.

Continuing our walk about the grounds, we entered the flower garden, which is laid out in beds, bordered with box; the dahlias were about all that remained in bloom at this late season, save here and there a stray rose; and we continued on to the lawn, where we found much of interest in the various specimens of trees and shrubs. *Bignônia grandiflora*, trained to a pole, and kept cut in, is a most ornamental object; here it stands uninjured, but in the latitude of Boston it may be had in equal beauty; the only labor required is to loosen the branches from the pole and lay them on the ground, where they can be protected with a few leaves. *Salisbùria adiantifolia*, the Ginkgo tree, ten feet, fine; several large and superb trees of the Norway spruce; Weeping ash, fifteen feet; *Aràlia spinosa* is an ornamental object, standing singly on the lawn; *Abies Smithidna*, *Cèdrus Deodàra*, Cedar of Lebanon, *Pinus excèlsa*, and others, were planted out, but were yet small, except the *Pinus*, which was four feet high; two large and fine chestnut trees, (one of

them the Spanish,) about thirty feet high, and so loaded with fruit that their branches touched the ground, were objects which every lover of trees should see; of the Spanish, Mr. Manice has gathered *twenty-four* fruits which weighed a *pound*. In front of the conservatory and stove, and near the house, were fine specimens of *Magnolia conspicua*, twelve feet high, which are perfectly hardy here; *M. purpurea* and *M. Soulangedna*. The yew is perfectly hardy.

We now entered the fruit garden, which is filled with standard and dwarf trees, the former in rows, about twenty feet apart; the unpropitious season had affected the trees here, as in other places, and Mr. Manice had but little fruit this year. We noticed, however, a tree of Beurré Langelier, with three or four fruits, the first time of its bearing here. About half an acre is filled with dwarf pear trees on the quince, now of good size. Mr. Manice has a plum garden on the plan which we have heretofore noticed, viz., a square planted with trees, under which the ground is wholly paved with brick, and surrounded with a high board fence, thus cutting off all means of egress for the curculio; the paving preventing them from making their way out of the ground, and the fence keeping them from the enclosure. The trees were in fine condition, and Mr. Manice informed us he had been successful in securing abundant crops of plums. The fig is cultivated here in the open ground, the plants being protected by large boxes, which cover the plants, with a few leaves thrown in among the branches, before the top is nailed on. The plan is worthy of being followed by all who like to try the fig in the open air.

The forcing-houses are extensive, being about one hundred and fifty feet long, and divided into three compartments, one of which is an early vinery, one a succession house, and the last a cold house. The crop was abundant, and the vines were yet bearing a quantity of fruit. One of the houses was nearly filled with the Muscat of Alexandria, so well ripened as to have that rich amber tint which it always acquires when fully mature. The walls are of brick, and every thing is built in the most substantial manner.

The various hedges, in different parts of the grounds, are exceedingly well managed—some are of the Cockspur Thorn—

others of the Washington; some of Three-thorned acacia—some of buckthorn—some of arbor vitæ, and others of the privet; all look well,—but to our fancy the buckthorn and privet bear off the palm, except when used as a screen, and then the arbor vitæ must claim preëminence. The verdure of the privet is deeper than the buckthorn, and it retains its foliage very late—qualities which add greatly to its value. The Washington thorn has a dark glossy foliage, but does not appear to make so compact a hedge.

We have remarked that the soil was light and sandy, and, consequently, quickly affected by the droughts of summer, and to such a degree as to greatly injure not only annual crops, but trees of all sizes and kinds. To counteract this want of moisture in the soil, Mr. Manice has, at great expense and labor, recently completed very extensive water-works, located in the rear of the park, the reservoir of which is elevated some twenty-five feet above the surrounding ground, so as to irrigate every part of his premises. The water is supplied from a well, elevated by windmill power, but a gale, subsequent to our visit, having demolished it, Mr. Manice informs us that he has now adopted a steam pump, which is to raise *two hundred gallons per minute*. The supply of water from a well, thirty or forty feet deep, is almost inexhaustible; a sufficient quantity to fill the reservoir, holding many thousand gallons, not materially lessening its depth. From the reservoir, under-ground pipes of iron, ten inches in diameter, conduct the water through all the main walks, and when wanted for use, a hose, applied to any of the hydrants, which are fitted at convenient distances, will discharge a volume of water with sufficient force to completely irrigate every portion of the grounds. The expense of constructing the water-works exceeded \$4000.

Mr. Manice deserves great credit for the taste he has displayed in making a place, naturally possessing so few advantages for a country residence, so full of interest. No department of horticulture has been neglected, and when the water-works are completed, Oatlands must become one of the finest residences on Long Island.

ART. II. *Desultory Remarks on the Principles and Practice of Horticulture.* By WM. SAUNDERS, New Haven, Conn.

THE amount of pleasure to be derived from horticulture, and the interest taken in it by its patrons, will, generally, be found in a pretty exact ratio with the success resulting from their operations, and the accomplishment of the objects and ends towards which their labor has been applied. Many who have entered enthusiastically in the cultivation of fruit trees, for instance, have, after a time, become disheartened by their want of success, and the enumeration of their failures has hindered others from attempting it. And, truly, when we look to the long array of difficulties, real or supposed, that are, from time to time, promulgated, there is some allowance for the conclusion. I say supposed difficulties, for it is evident that, in many instances, no effort has been made to trace effects to their proper causes; and, in some cases, where the effort has been made, to use a familiar phrase, "the saddle has been put on the wrong horse." As instances, I may mention the occasional blistering of the leaves of peach trees, in the early part of summer, which I have heard stoutly asserted was produced by the aphides, and I once failed in trying to convince a worthy old gentleman that it was a fly which caused the leaves of his apple trees to curl, and not, as he supposed, the ants he saw running up and down the stem; and in the last number of your Magazine we have another illustration of the fact, in the article on pear tree blight, where that malady is, I think, traced to its proper source.

It may safely be assumed then, that many of the causes assigned for particular effects, have been prematurely arrived at, and facts have been thrown aside to make way for long cherished theories, which, when investigated, have been found to be simply absurd, and contrary to any law or provision of nature; for, although the culture of plants, as articles of food, or objects of beauty, dates from a very ancient period, it is only very lately understood to be founded on general and fixed principles; and I believe that I am justified in saying that the majority of those who cultivate the soil, have yet to learn that it is by the operation of natural

laws that plants grow, and that all cultivation, unless founded on these principles, must be uncertain and unsatisfactory.

The cultivator of the soil has constantly to contend with various incidents which go far to counteract his best efforts; weather,—climate,—soil,—all have a material influence upon his operations. Insects and vermin of various sorts have to be contended with, forming a phalanx of formidable opponents, requiring skill, intrepidity, and a knowledge of their habits and natures, to enable him to adopt measures for their extermination. Sudden and extreme changes of weather are too well known to be often the cause of ruinous disappointment, and, if the location and other physical circumstances are bad, success will be limited, although his management may be unimpeachable.

Keeping these things in view, it is plain that a thorough knowledge of the fundamental laws, the definite and immutable principles on which these physical sciences are founded, is of the utmost importance to the cultivator of the soil, enabling him to see the rationale of his operations, and contend, with some chance of success, against the many evils with which he is assailed.

Practice without science may be compared to a ship without either compass or rudder—the sails may be unfurled, and every advantage taken to catch the favoring breeze, but the chances of reaching the desired haven are few; so, seed may be sown, trees planted, and all the minor details performed, but, without science (the compass,) success will result more from accident than certainty; and the probability of a successful termination will, in both cases, be very much alike.

On the other hand, there is not wanting those who, confiding solely on theoretical knowledge, are as little inclined to listen to the experience of practice, as the others are to the dictates of science. It is needless to say, the one extreme is as bad as the other, and it is to the intelligent, practical man that we must look for the useful application in art of the demonstrations of science; and although the truths that scientific research has already revealed, may be looked upon as only faint glimmerings of mighty principles yet to be divulged, if the light that has already been thrown upon the economy of vegetable life was more generally diffused, many

of the obstacles which now intervene, would be observed and eventually removed.

I hope these desultory remarks will not appear altogether out of place, for it cannot be denied that an empirical system of cultivation has long been practised, but is gradually giving way, and the sooner it is consigned to oblivion the better, that it may no longer interfere with the progress of science. To conclude, in the words of the poet,

“ Strength may wield the ponderous spade,
 May turn the clod, and wheel the compost home,
 But elegance, chief grace the garden shows
 And most attractive, is the fair result of thought.”

New Haven, Oct. 27, 1849.

ART. III. *Descriptions and Engravings of Select Varieties of Apples.* By the EDITOR.

XXIV. SUMMER ROSE. COXE'S *View*, &c.

Harvest, }
 Woolman's Harvest, } of some collections.

The Summer Rose (*fig. 46.*) is a beautiful summer apple, of medium size, and of excellent quality, well deserving a place in every good collection. Coxe describes it as an apple of “singular beauty and excellence, both for eating and stewing;” but, though this was thirty years ago, it does not appear to have been but little cultivated, except in New Jersey, where it is known, in many places, as Woolman's Harvest, under which name we received it from thence, five or six years ago. It is not often seen in our markets, and what few find their way there, are received by the way of New York. Our trees came into bearing this year, and we were surprised to find it so good a fruit.

The tree grows vigorously, having an erect habit while young, but forming, in time, a fine spreading head; it also comes earlier into bearing than many kinds of apples.

Size, medium, about two and a half inches broad, and two

deep: *Form*, roundish, depressed at each end, very regular in shape, largest in the middle: *Skin*, very fair, smooth, of a pale, greenish-yellow hue, having a waxy appearance, con-

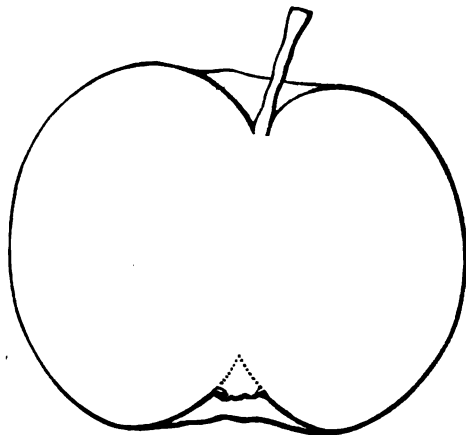


Fig. 46. Summer Rose Apple.

siderably clouded and marbled with a clear bright red on the sunny side, and rather sparsely sprinkled with russet specks: *Stem*, short, about half an inch long, rather slender, and not deeply inserted in a shallow regular cavity: *Eye*, medium size, open, and moderately sunk in an abruptly depressed and slightly furrowed, open basin; segments of the calyx short: *Flesh*, greenish-white, fine, crisp, and tender: *Juice*, abundant, subacid, sprightly, high flavored, and excellent: *Core*, small: *Seeds*, small, light colored. Ripe in August.

XXV. FALL HARVEY. *Book of Fruits*, 1st Ed.

The late Mr. Manning considered the Fall Harvey, (fig. 47) "without question, the finest fall and early winter apple." It is a large, showy, yellow fruit, similar in general appearance to the Fall Pippin, and also resembles it considerably in its eating qualities. It was first introduced to notice, we believe, by Mr. Manning, and is supposed to have originated in Essex county, Mass., where it is much cultivated, and from whence the market is mostly supplied with this variety. It is a vigorous growing tree, and a good bearer.

In the nursery it may be easily known from the Fall Pippin, by its yellower and more slender shoots. When old, the trees make a good head.

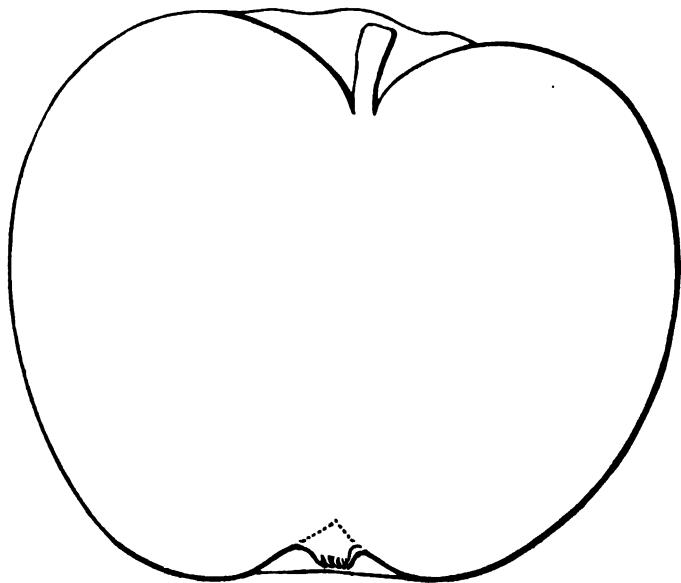


Fig. 47. Fall Harvey Apple.

Size, large, about three and a half inches broad, and three long: *Form*, roundish, regular, little flattened at each end, somewhat ribbed at the base, and rounding off to the crown, which is large, and slightly oblique: *Skin*, fair, smooth, rich, deep-yellow, traced with russet around the stem, rarely tinged with blush on the sunny side, and thickly covered with small russet dots: *Stem*, short, about quarter of an inch long, stout, and little sunk in an open, shallow, and uneven basin: *Eye*, large, closed, and very slightly depressed in a broad, shallow basin; segments of the calyx, broad, short: *Flesh*, yellow, little coarse, crisp and tender: *Juice*, plentiful, rich, subacid, and high flavored: *Core*, large, very open: *Seeds*, medium size, short and plump. Ripe from November to January.

XXVI. VANDERVERE. *Coxe's View, &c.*

Staalclubs, of some, according to Coxe.

Few apples have a more beautiful and prepossessing appearance than the Vandervere, (*fig. 48.*) We have had specimens from various parts of the country, but those from the

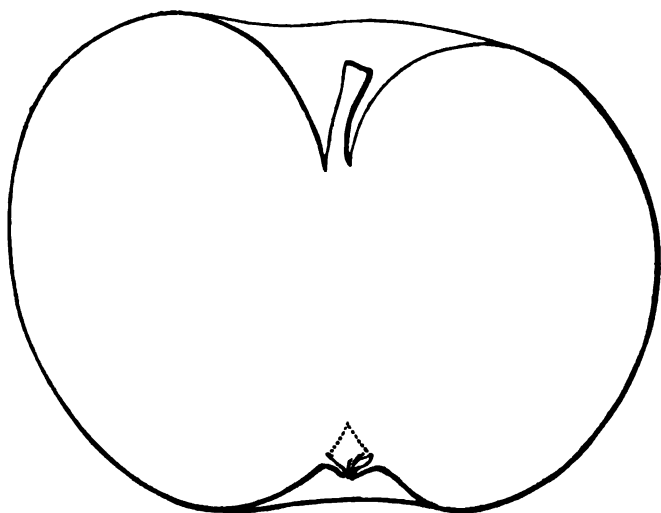


Fig. 48. Vandervere Apple.

light soils of Western New York have been preëminently beautiful, being perfectly fair, with a yellow ground, covered with brilliant red in delicate stripes and splashes. In the West, where it is much cultivated, it is a favorite apple; but in New England it is yet very little known. We hope, however, it will be introduced more generally, as we are sure it would be a favorite fruit.

The Vandervere originated in Delaware, near Wilmington, and is there much celebrated; but its good qualities and handsome appearance have bespoken its praise until it has become very generally known. The tree delights in a rich, light loamy soil, and in such a situation the trees grow to a large size, and produce great crops.

Size, large, about three and a half inches broad, and two and three quarters long: *Form*, roundish, flattened at each

end, narrowing towards the crown: *Skin*, fair, smooth, rich deep-yellow, covered with a deep vermilion-red, finely and rather indistinctly striped, and thickly dotted over the surface with large, yellowish spots: *Stem*, short, about half an inch long, rather stout, and deeply inserted in a broad, smooth, rather open cavity: *Eye*, medium size, closed, and moderately sunk in a broad, open, furrowed basin; segments of the calyx rather long: *Flesh*, yellow, fine, crisp, and tender: *Juice*, abundant, pleasantly acid, sprightly, high flavored, and excellent: *Core*, medium size, nearly closed: *Seeds*, medium size, sharply pointed, brown. Ripe from October to January.

ART. IV. *On the Cultivation of Grape Vines in Greenhouses.* By JAMES HUTCHINSON. From the Journal of the London Horticultural Society.

In a previous volume, we have detailed at length, the treatment of grape vines in the greenhouse, as deduced from our own experience; to this article we would refer all who are about commencing the cultivation of the grape. But, as we are always glad to give our readers the results of the practice of successful grape growers, we now do so in the form of an article from the last number of the *Journal* of the London Horticultural Society, by Mr. Hutchinson. It is concise, plain, and free from all ambiguity,—which cannot be said of some of the articles in the same journal,—and commends itself by its simple detail of facts. In connection with what has previously appeared in our pages, it will materially aid the grape cultivator in the successful treatment of his vines.

Mr. Hutchinson's observations on the importance of covering the border, to preserve a terrestrial warmth, are less applicable to our climate than to that of England. Our clear sky,—drier atmosphere,—and hot sun,—accomplishing what Mr. Hutchinson endeavors to do by thick covering. It is necessary to cover the border sufficiently to keep out all frost; but, beyond this, in greenhouse cultivation, where the grapes do not break till March, nothing more is required. In early vineries, where forcing is commenced as early as January,

the same covering Mr. Hutchinson recommends, would be most excellent; and the water-proof canvas we would suggest as far preferable to boards, which, we believe, are used by Mr. Allen, and some other grape growers, as the means of keeping the rains and snows of winter from chilling the border. His recommendation, of frequently stirring the border, to keep up the moisture during summer, should be strictly followed.

Mr. Hutchinson, it will be noticed, makes his borders of "fibrous turf, leaf soil, and horse dung;" leaving the carcasses of animals and other vile compounds, often recommended, to those who choose to use them; and we commend his practice to all who are about building graperies, and making new borders.—*Ed.*

The vine has been successfully cultivated in pine-stoves and vinehouses, in Britain, for many years, but its culture in the greenhouse has not been attended with equal success. This may proceed from various causes, such as the condition of the vine-border, improper temperature, arëation, &c. If the border be imperfectly drained, or the soil exhausted, the first thing to do is to remove the earth of the border to the depth of three feet, if on a sloping surface, but if flat, two feet will be quite sufficient. It should not be less than fifteen feet wide.

It is impossible to lay down an invariable rule as to the depth of soil which ought to be removed, in every case, but I wish it to be distinctly understood that it is not necessary to dig a deep pit, as some do, for the purpose of filling it up with a mass of materials through which the sun's heat will never penetrate; for, although such a border may be made of the best composition, it cannot be called a good border.

When the old soil is cleaned out, a good drain should be made along the front of the border.

In forming the new border, the bottom part should have a good slope, and should be covered, about ten inches deep, with rough stones. Over the stones, place a covering of furze, with the bushy side uppermost and the woody part under. A row of turf should be placed upon the furze, with the grassy side downward. This will form an effectual and a permanent drainage to every part of the border.

The new border should be composed of fibrous turf, leaf soil, and horse dung, which should be filled in to the depth of four feet, as it will finally subside to about three feet. It is unnecessary to prescribe the proportions to be used of the above ingredients, as that must depend on circumstances. Leaf soil is, generally, a scarce substance; and therefore, should the loam be of a strong quality, it should be mixed with light soil, as much of a vegetable nature as possible, keeping in view the principle that the composition should be sufficiently porous.

If the old vines have been growing in a wet soil, or a great portion of their roots decayed or rotten, I would recommend, in planting them, to lay a portion of the stem across the border, and peg it down with strong pegs, about six inches deep. As to what length ought to be laid down in this manner, that will depend on the state of the old vine. The lower part of neglected vines is generally bare of young wood, perhaps half-way up the main stem. Some of the spurs beyond that, may even be exhausted. I would, therefore, plant so as to have a good fresh shoot at the entrance of the vine into the house, or at least, at the foot of the rafter. This shoot should be cut down to two or three eyes, and if all go on well, it will grow from twenty to thirty feet the first season. If young vines are required for planting, good strong vines should be procured from a respectable nursery, and planted about the beginning of March. The roots should be well spread out, and three feet of the stem laid down horizontally, six inches deep in the ground.

The sorts most suitable for a greenhouse are,—Black Hamburgh, Black Prince, Black Prince Hamburgh, White Sweet-water.

Temperature of the border.—In No. 112 of Loudon's *Gardeners' Magazine*, I have directed the vine border to be covered, a fortnight previous to the commencement of forcing, with horse dung of the best quality, to the depth of ten or twelve inches. I would still recommend the same method, or something similar, in every case in which the border has been uncovered, or insufficiently covered during winter. But, as the successful cultivation of all plants, especially exotics, depends so much on terrestrial climate, I now prefer to have the border covered in the autumn, so as to prevent the escape

of the heat contained in it at that season. It fortunately happens that I have now sound data to proceed upon, in giving directions in this matter. The following returns are taken from Mr. Thompson's Tables of Ground Temperature at Chiswick, which will apply, with little variation, to the greater part of Britain and Ireland:—

	One foot deep.	Two feet deep.
August, . . .	62.37	61.95
September, . . .	58.35	59.04
October, . . .	52.38	53.74
November, . . .	46.79	48.09

I would advise, therefore, that the border should be covered with a light covering of dry leaves, about the end of September, for the temperature of the border will fall considerably in October, as will be seen from the above table. A covering of water-proof canvas should also be applied to carry off heavy rains. As soon as a sufficient quantity of leaves can be collected, they should be laid on about eighteen inches thick. Where leaves cannot be had sufficiently long, dung or fern might be used instead. But, whatever material is applied, it must not be forgotten that protection from the rain is indispensable, or the heat of the border will be exceedingly variable.

The covering should be removed about the middle of May, when the border should be forked over. It should be frequently stirred with the Dutch hoe, during summer, but especially after heavy rains. If the border is managed in this manner, it will seldom require any watering if situated in the western part of Britain or Ireland. In the eastern part of this island, the watering of the border should be attended to when necessary, but especially at the commencement of the last swelling of the grapes. The water should have been warmed by exposure to the air.

Temperature of the house.—If the house were covered with water-proof canvas at night, during frosty weather, very little fire heat would be requisite, and vines and all plants kept in the greenhouse, much benefited. In winter the thermometer should never exceed 40° when the assistance of artificial heat is required. About the beginning of March, when the buds of the vines are well swelled, the heat should be raised to 50° if dull weather, and 60° or 65° during the day, if clear

weather. This temperature will be advantageous to geraniums, fuchsias, &c., at this season. When the mornings are frosty in this month, the thermometer in the greenhouse is generally down to 45° or 46° with me. I have had it as low as this even when the grapes were in flower, and I have never observed that they sustained any injury by this low temperature. As the season advances, of course the heat ought to be increased to 55° or 60° at night, and to 70° , 75° , or 80° during the day. 50° and 55° at night, may be safely taken as a general rule, for the first and second month's growth. Air will be required, both night and day, at all times when fire heat is necessary. In mild weather, in winter, I give plenty of air during the day, and a small portion at night also.

No front air will be required in the early part of the season, unless the weather is very mild. In summer, when the nights are warm, a small portion of air should be left on all night at two lights. If the temperature be low in the morning, shut the house, and give no air till eight o'clock. It might be sooner or later, according to the situation of the house. It is impossible to lay down rules as to the time when air ought to be given, or the quantity requisite at all times, nor is it necessary, for this department of the business is sure to be best performed by the person who keeps general principles constantly in view, and not by him who is entirely guided by written directions. It should always be remembered, that heat should accompany light, and coolness darkness.

Pruning.—I formerly recommended the long system of pruning vines as best adapted to late vineries; but, as the vines must be confined to the rafters in a greenhouse, in this case I would advise the adoption of the spur system. A chief objection to this mode of pruning is, that in the course of time the spurs get long and ragged; but if the border is in tolerably good condition, and covered as I have directed, the vines will push vigorously from various parts of the old wood of the spur, which may, therefore, be shortened as opportunities offer. It is unnecessary to enter further into this department of the subject, as the summer pruning and the preparation of young vines for different plans of training, are generally understood by gardeners.

Thinning and pruning the Grapes.—Thinning should be commenced as soon as the grapes are the size of peas. They should be thinned so as not to press too much against each other when ripe. If not sufficiently thinned, they will not swell properly, and many of them will rot, especially if a damp season. The great secret in preserving grapes is, to keep the house thoroughly dry, and as cool as possible, so that frost is excluded; therefore give air abundantly. In no case should artificial heat be applied when the house is shut, unless during severe frost and the roof of the house unprotected. It is evident that the more heat is introduced to the house, the more rapid is the ascent of moisture from the lower to the upper parts of the house; and, as heat and moisture are the chief agents in decomposition, the common method of applying artificial heat, when the house is shut, for the purpose of preserving grapes, only hastens their decay.

It is not to be expected that so large a crop of grapes can be obtained from a greenhouse, as from a late vinehouse, pruned on the long system; but if the system is pursued which I have recommended, the produce of grapes in a greenhouse will be superior to a vinehouse of the same extent, whose management is conducted without regard to the recent improvements in horticultural science.

MISCELLANEOUS INTELLIGENCE.

ART. I. General Notices.

Rare Coniferae and Improvements at the Cairnies, Perthshire, the property of George Patton, Esq.—(Continued from page 509.)—The following have leaves in fives, rarely fours in a sheath.

Pinus Devoniana,—native name, *Pino blanco*,—is an inhabitant of the mountain Ocotillo, in Mexico, between Real del Monte and Regla. Judging from the cones, this should be a stupendous species, as these are a foot in length; yet it is set down as attaining only a height of 80 feet by *Endlicher*. An undoubtedly valuable kind, quite hardy, yet new, and high priced. It is, of course, quite young here.

Pinus macrophylla.—Inhabits the same mountainous district in Mexico, with the last, where Hartweg found only one tree, which had attained to no great height, though it is believed to be, when fully grown, a very large

tree. It is adorned with magnificent foliage, 14 inches in length, which must lend a transcendent softness and grace to the full grown tree. It is, as yet, very rare, and highly prized by pine fanciers. Being new, it is here, of course, quite young.

Pinus Hartwegii.—Is of the same beautiful long foliated character with the preceding. This strikingly beautiful Mexican species was found by the discoverer, whose name it bears, on Monte Campanario, at 9000 feet of elevation, just above the boundary where the *Abies religiosa* ceases to grow. It is remarkable for the length and abundance of its fine, light tasselled foliage; and, though by no means a tall tree, must produce a very picturesque effect in the grown specimen. It is believed to favor a swampy bottom; quite hardy. It is yet quite rare, and is here quite young.

Pinus Russelliana.—Found near the same locality in Mexico, with the preceding, near the Real del Monte, on the road between San Pedro and San Pablo. The foliage is remarkable for its length. A large sized species, set down as growing on swampy ground; hardy, also young and rare.

Pinus Montezumae.—Found on the Orizaba and other mountains, in Mexico, still more remarkable than the above for its length of foliage, "foliis longis, (pedalibus sesquipedalibus) rigidis," &c. It is the *Pinus occidentalis* of Humb. Bonpl. Kunth, &c., and has a variety named *P. Lindleyi* of Loudon. It has been tested and found quite hardy.

Pinus Pseudo-Strobus.—Found at an elevation of 8000 feet, at Anganguco, in Mexico, and distinguished, like the above, for its elongated foliage, which, being of a light glaucous green, is very graceful. It offers well, and attains, when fully grown, a large size. Of doubtful hardihood. It is here planted on a shady, shelving rock, where, as yet, it has indicated no signs of tenderness, having withstood the sharp frost which was here severely felt in the beginning of June last.

Pinus Lambertiana.—Found by Douglas, in North-west America, between 40° and 43° North latitude, and 100 miles inland, where it reaches the prodigious height of between 150 and 200 feet. Endlicher even adds *Arbor gigantea non nunquam pedes ducentenos excedente*. This is, probably, the most stupendous tree of this whole division. Though young here, I observed one specimen which has produced cones—abortive it is true—but though the plant was only 9 inches high, it bore 15 such formations. This species is quite hardy.

Pinus monticola.—Found in the mountains, near the Kettle Falls of the Colombia, and at the river *Spokan*, in North-west America. Beautiful and rare. It is believed that a spurious species has got abroad in many parts, which appears to be nothing else than a variety of *P. Strobus*. Here the graft is from the Dropmore tree, which is, unquestionably, genuine, and is plainly the same with that of the Keillour Pinetum, with which I carefully compared it. The tree is very resinous, and grows to a great size. The true kind is, undoubtedly, hardy, and strikingly beautiful in its habit. This species cannot be sufficiently recommended.

Pinus Ayacahuite.—This splendid species was found by Ebrenerg, growing in the mountains of Chiapa and Oaxaca of Mexico. Mr. Hartweg

also found it in Guatemala. It is a tree of 100 feet; the young branches are clothed with a ferruginous down. It is of the *Strobus* tribe, but shorter leaved.

Pinus Strobus nivea.—This variety of the *Weymouth* pine offers to become a decided beauty. In its native habitats in Northeast America, this species sometimes attains the magnificent height of 200 feet. It is found near the Mississippi, at the Lake of St. John's, from 48° to 51° North latitude, and as far up as the Alleghany Mountains. This species is beautiful, and this variety eminently so.

I must, for the present, pass over many other interesting species which are grown here of the section *Pinus*, with

Pinus tuberculata.—It is found in Monterey, in California, near the sea-shore, in 36° North latitude. It is a splendid species, reaching 100 feet, and quite hardy. I have observed that Hartweg holds this as identical with *P. insignis*, the exposure to the sea air producing the tubercles, and cramping the vigor, which he says constitute the whole difference. Let growers here determine.

Of the *ABETINÆ*, there are here most of the rarer kinds.

Abies Douglassii.—There are here many very promising specimens of this well-known, magnificent tree. I examined two specimens on the neighboring estate of Lyndoch, which appeared distinct varieties, one with lighter, another with darker foliage, the latter having its branches more horizontal, the former more fastigiate. The dark foliage kind appeared to be from 35 to 40 feet in height, and above three feet in girth, and covered an area of about 90 feet in circumference, probably the finest of its kind in Scotland. In noticing this tree among the Belstane Coniferæ, I stated it as reaching 100 feet in height. This monarch of the *Abietinæ* attains a far greater height. "Arbor magna, 150 et 200 interdum pedum altitudinem attingens trunco ambitu 20 ad 55 pedes metiente," so says Endlicher. Dr. Lindley notices it as attaining even a height of 230 feet and upwards, with a girth of 75 feet. It is found forming vast woods, between 42° and 52° of North latitude, near the Colombia River, and sometimes in Mexico. Again I would urge the extensive growth of this handsome and gigantic spruce, which adapts itself to any locality where there is soil to bear it.

Abies Menziesii, is a Californian species of great beauty, perfectly hardy, and offers here to become very handsome in the full-grown tree, the timber of which is highly valuable. It is the *Pinus Menziesii* of Douglas and Lambert, and the *Abies Menziesii* of Loudon, whose classification is generally followed.

Abies Brunoniana of the Himalayas, also offers well. If hardy, its graceful habit and beautiful silvery shaded foliage entitle it to a place in every pinetum; grows from 70 to 80 feet. Habitat, Bhootan, and Nepal, at Buni-pain, and in Gossainthan; *synonyms* *Pinus decidua*, *P. dumosa*, *Abies dumosa*; native names in Bhootan *Tung-shing*, in Nepal *Changathasi Dhup*. Those having the means of doing so, should endeavor to obtain seeds of this valuable kind, which is a beautiful thing for lawns.

Abies Nordmanniana.—This rare and truly noble species is variously

classed as *Pinus*, *Picea*, and *Abies*, Endlicher lending the weight of his opinion to its being ranged under the latter head. It was discovered by M. Nordmann, whose name it bears, on the ridge of the Adshar, near Guriel, above the Fountains of Cyrus, at the river Nataneh, at an elevation of 6000 feet, and in the declivity on the southern side of the mountains lying between Cartilinia and Achalgich, round about Azehur, as far as the Alpine region, interspersed with *Pinus* (*Abies*) *orientalis*, as observed by Wittman. It has a trunk of the straightest growth, 80 feet and upwards, with a diameter of 3 feet. Enlicher notices it in glowing language, as among the fairest of its race: "Arbor certe pulcherrima foliorum colore magisquam in reliquis argenteo et strobilorum mole." This is a valuable, but a high priced species. Its wood is harder than the *Abies orientalis*, and is never attacked by insects; quite new and hardy; plants very young. I have noticed this among the *Piceas* in the Belstane Coniferæ.

Here also are *Abies Fraseri*, *Abies cœrulea*, *Abies Khutrow* or *morinda*, and others. I cannot close my remarks on this fine section without another word in favor of the common Norway Spruce.

Abies excelsa of Loudon, the *Pinus Picea du Roi* of Endlicher, *Pinus Abies* of Linneus, with a dozen of other synonyms. Planted here, as I have already noticed, between 30 and 40 years ago, the trees have attained a height of 50 feet and upwards, and, with their large dark foliated branches sweeping the ground, produce a fine effect. These form a beautiful feature, skirting the belts above alluded to, and have mainly contributed to the improvement of the climate, by the shelter which they secure. Growing on sterile soil, on the loftiest Alps, they court a rigorous exposure. In one of the most glowing passages of his most impassioned poem,* Lord Byron thus apostrophizes this beautiful species:—

"But, from their nature, will the *tannen* grow
Loftiest on loftiest and least shelter'd rocks.
Rooted in barrenness, where nought below
Of soil supports them 'gainst the Alpine shocks
Of eddying storms; yet springs the trunk and mecks
The howling tempest till its height and frame
Are worthy of the mountains from whose blocks
Of bleak gray granite into life it came,
And grew a giant tree."

Tannen is the plural of *Tanne*, the German of *Fir* in general. The present is the *Swarztanne*, *Feuchttanne*, or *Rothtanne*, of Northern Germany, and seeks a still loftier elevation on the Alps than the *Picea pectinata*, the Silver Fir, which latter only reaches from 2000 to 4000, while the former reaches from 4000 to 7000 feet of elevation. As one of the most rapid growing, and retaining its massive, thickly-leaved branches even to the ground, throughout its growth, it cannot be too highly extolled a tree for screens and shelter. It has even been used as *fences*, as I observed it on the estate of George Mercer, Esq., of Gorthy, adjoining Mr. Patton's, on the west, where it seemed to serve the purpose well. Its great cheapness,

* Childs Harolds.

and its ready adaptation to every climate and soil, costing only some 2s or 3s per 1000, present irresistible claims on landed proprietors for extensive planting.—(*To be continued.*)

Autumnal Treatment of Greenhouse Plants.—The important process of ripening the wood of these plants, is an indispensable one to their successful cultivation, but is too little attended to by the majority of gardeners, who, either through having their time too much occupied with the numerous cares and duties which the revolving seasons bring with them in their train, overlook it; or, as is the case in many instances, through ignorance of the utility of this necessary process, as on it depends in a great measure the attainments of the objects for which they are cultivated, viz., a fine display of bloom. How frequently do we see greenhouse plants left in the open air, during the autumn months, in wet seasons, exposed to drenching rains, the consequence of which practice is the production of watery, ill-ripened wood; the fluids are not properly assimilated, the effect of which in the tender species is, that the powers of vegetation become enfeebled, and, frequently, a derangement of the vital functions takes place, resulting in the extinction of vegetable life. All the plants placed under the above unfavorable influence, require that a higher temperature should be maintained through the winter months, to resist the action of frosts, than if the wood had been properly matured, and a very scanty supply of bloom in the following season is the inevitable consequence of this system of management. Those that are so fortunate as to occupy the greenhouse during the autumn frequently sustain injury from injudicious watering; a greater quantity of water and soluble matter is absorbed by the roots, and drawn into the system, than can properly be decomposed by the action of the solar rays in this cloudy atmosphere of ours; the system is filled to repletion with crude unassimilated juices; the tissue distended with watery matter, and a scarcity, if not a total absence, of these peculiar secretions in the plant, on which the formation of flower buds depends.

On the other hand, in administering water only in proportion to the amount of sun-light, keeping the plants as dry as can safely be done, in preserving the vital functions unimpaired, by not encroaching beyond the limits which their capacities fit them for enduring droughts, all the vital actions are maintained in a healthy condition, and there is a concentration of elaborated matter in the interior of them, tending to the formation of flower buds, and, from the solidification of the tissue, they are better adapted to withstand the action of frost during the winter.

As our object is to obtain maturity in the wood, it is requisite that we should judiciously apply the great agents of vegetation,—light and heat,—in order to attain the above-mentioned physiological condition; and, presuming that all greenhouse plants are secured in their winter quarters before the termination of August, a temperature of 65° by day, Fahrenheit, *max.* temperature, and 50° by night, *min.* ought then to be maintained, allowing plenty of air and fire heat to sustain the atmosphere at the required temperature, excepting when the diurnal temperature can be maintained by abundance of

solar heat ; this course should be followed till the latter end of October, when the ripening process will be accomplished, at least so far as is practicable under the atmospheric conditions of this country, considering the small amount of solar heat we have in the autumn months, when the temperature may be gradually lowered ; merely keep it at the amount required to repel the attacks of frost. The above treatment is applicable to all except autumn or winter flowering plants, which, of course, require a larger amount of water.—(*North British Agriculturist*, 1849, p. 331.)

On Forming Evergreen Gardens.—As the present is the most favorable time for planting evergreen trees and shrubs, permit me to direct the attention of your readers to this interesting tribe of plants, and to the great effect they are capable of producing in garden scenery, whether in the natural or geometric styles. Suited as they preëminently are to embellish and harmonize with every style of architecture, they may easily be adapted to every variety of situation. Considering the great number of evergreen trees and shrubs now procurable in British nurseries, presenting but few difficulties in cultivation, and the charming interest they afford for seven or eight months in the year, I hope their intrinsic merits will provide for them that share of patronage they so greatly deserve. In the palmy days of the fine old Dutch and French styles of gardening, evergreens were extensively used and prized, as forming a prominent feature in producing effect. The green slopes, long terrace-walks, and architectural boundary lines of these grand out-gardens, would have looked bald and meagre had they not been accompanied by the yew, holly, and box in this country, and the bay in Italy. And, notwithstanding that sometimes fickle personage, called "Taste," caused many of the fine geometrical gardens in this country to be destroyed, and replaced by a style equally as monotonous, and, in many cases, much more vague and undefined, I consider that an attempt to restore this highly-embellished style of gardening, (denuded, certainly, of the lions, griffins, and other nondescripts which would excite no wonder at the present time,) would be attended with the happiest results, and prove a source of enjoyment to those who admire form, beauty, and proportion in gardening, as well as architectural display. The only nobleman or gentleman who has carried out this style of gardening to any extent, (that I am aware of,) is the Earl of Harrington, at Elvaston Castle, in Derbyshire. Not having seen this place myself, I can only repeat that I am told it more resembles the wondrous ideal gardens of eastern romance, some retreat in "Temen's blissful clime," than the garden of an English country residence ; and I hope, when finished, its liberal proprietor will grant permission to the public to inspect what is considered by competent judges, the highest efforts of artistic gardening in this country. Evergreens, to produce a proper effect, should be planted in considerable masses, and by no means mixed with deciduous plants. Sufficient variety for the most extensive designs are to be procured, embracing every intermediate variety of form and outline, from the picturesque grandeur of the cedar and araucaria, to the humble savin. Of flowering evergreens, what among shrubs of any kind can equal in gorgeous coloring a bank of scarlet rhododendrons ? No less beautiful is the

delicate pencilling of the kalmia, or the modest-looking andromeda; and where shall we find a compeer for those universal favorites, hardy heaths? Such is the extensive stock of raw material the man of taste has to work with; most of them growing in any description of soil, excepting, perhaps, a retentive clay, and on many of the poor, sandy soils where deciduous trees would barely live, would thrive well; and even on the most unfavorable sites, the addition of a little sand and peat-soil, would do wonders in assisting them to grow. I will resume the description of the more ornamental kinds, in succeeding numbers.—(*Gard. and Far. Jour.*, 1849, p. 709.)

On the Cultivation of Hardy Bulbs.—**LILIUMS:** The hardy kinds of this tribe deserve the particular attention of every flower-gardener. The beauty of their flowers and elegance of their forms, have always been admired, in ancient as well as modern horticulture. They are invariably handsome in their several stages; but it is when their chaste and gorgeous flowers are expanded, that they present their highest attractions: there is a fulness and completeness in their structure, a brilliancy and softness in their colors, which render them more effective as objects of beauty in a flower garden, than any other plants. Of the hardy kinds there may be about fifty species and varieties, all more or less worthy of cultivation; but in England we seldom see many more than a dozen grown in gardens. On the continent, however, they are much more numerous; and in some places treated with the greatest success. Few plants can have a better effect, when well-grown on a large rockwork, than the four species called *L. testaceum*, *pyrenaicum*, *martagon*, and *superbum*; they are quite hardy, with the exception of *L. testaceum*, which requires a little shelter in winter. Near the water, or in a flower-garden, or in front of a house, a bed of *L. longiflorum*, mixed with *L. tigrinum*, at about two feet from each other, is most splendid; the pure white color and comparatively dwarf habit of *L. longiflorum*, have a peculiarly striking effect in being intermixed with *L. tigrinum*, the flowers of which are of a deep orange-color, and spotted with dark purple. It grows from two to three feet high, and, therefore, in a mixed bed, stands considerably above the others. *L. eximium*, and *L. Browni*, also white flowering sorts, are not quite hardy, but the flowers are far more handsome than *L. longiflorum*; the former is of pendant habit, and the petals lanceolate and reflexed: it is a fine, bold variety, of a delicate white. *L. Browni* has a very fine brown shading on the back of its petals, and may be mentioned here. The *L. lancifolium rubrum*, or *Speciosum rubrum*, (as it is called by Thunberg,) is considered as the original species, of which the others are more or less varieties or hybrids. The following are the names of these varieties:—*L. lancifolium punctatum*, *L. lancifolium album*. The following are sub-varieties of these:—*L. speciosum roseum marmoratum*, *L. sp. rubrum marmoratum*, and *L. sp. album bruneo-maculatum*. These, as well as the different sub-varieties of *L. lancifolium*, may be grown in pots; the bulbs generally begin their growth in February, when they must be taken out of the old soil, and potted afresh in the following mixture, of equal parts, of sandy peat, rich loam, leaf mould, and well-decayed cow or horsedung. The pots should not be too broad on the top. Drain them

well before potting ; plant the bulbs four inches deep, and do not give them any water before the young shoots are to be seen ; put them in a cold frame, or greenhouse, near the glass, until the young shoots are about six or eight inches high ; then plenty of air must be given to them. Towards the middle of May they will require to be shifted into larger pots, and great care must be taken not to destroy any of the roots. After being fresh potted, they may be taken out and placed in the open air altogether, but not exposed to the sun's rays for six or eight days ; being in the open air, they will require a good supply of water, and they may remain out-of-doors until the flowers are very nearly open, when they may be removed to the conservatory, if desired. Managed in this way, they will flower profusely ; and if the conservatory is not too much exposed to the sun, they will keep in flower for a considerable time. *L. Browni* and *L. eximium* require almost the same treatment ; but, being a little more tender, it would, perhaps, be better to let them remain a little longer in the house ; and if taken out, they should be plunged in an open frame, or flower-bed. As soon as they have done flowering, they must be kept drier, and water must be given sparingly, becoming gradually less. When the stems and leaves get yellow, the plants must be left quite dry in a greenhouse ; and about a month before the time to put them in fresh soil, they must be taken out of the old soil and put on a shelf. *L. superbum*, *canadense*, *umbellatum*, and *philadelphicum* are very fine North American species, and they can be managed just as the *L. lancifolium*.—(*Id.*, 1849, p. 709.)

[We need only add to the above excellent advice, that *L. eximium*, and the varieties of *lancifolium*, in our climate are quite hardy, if planted a proper depth and covered with a few inches of leaves or manure. We have just set out a large bed containing over 300 bulbs.—*Ed.*]

Cultivation of the Pansy.—I know of no plant so easy to cultivate, and at the same time so difficult to keep from year to year, as the pansy. It may be raised from seeds and bloomed in a few months, and an endless variety of color, marking, and texture, may thus be produced. Choice kinds, either selected from the seed-beds or procured from the florists, are seldom bloomed more than once, unless by some expert amateur, or in some favorable locality. In winter the pansy is extremely liable to damp off, although protected in frames ; and we all know to our mortification the ill effect of a summer's sun on it. It is scarcely possible to point to another tribe of plants so peculiarly the amateur's as this, or one that puzzles him to cultivate more. The following hints may assist him.

Seeds sown in autumn in pans, or even in the open border, will come up readily in a few weeks. The seeds should be slightly covered with fine soil, if covered at all, as half the seeds sown rot in the ground, from being covered too deeply. As soon as they expand the second set of leaves, they should be planted out into beds, in lines, from 8 to 10 inches asunder. If the seed has been carefully saved from good kinds, an interesting display will be the result ; and the raising of new varieties is a labor of peculiar interest. As spring advances, the plants so treated, will commence flowering. The next point will be to select those which possess good qualities,

with a view to perpetuate them. There are many singular and pleasing varieties that do not come within the arbitrary rules by which florists' flowers are judged, which, nevertheless, are worth retaining for common border decoration; but, if a rigid adherence to these rules is determined upon, then the flowers must be as nearly round as possible, expanding their petals flatly; crumpled petals, with ragged edges, are points that will justify their being cast aside. Round flowers, with flat petals, must always have firmness of texture to recommend them; a flimsy flower in the fancy, although possessing other properties, is universally discarded. The eye should be concentrated, and not starry; the colors soft and clearly defined. These instructions will enable the amateur to select the right kinds from his seedling beds. As soon as he has determined upon those worth retaining, propagation should be commenced, and this is a simple matter. Cuttings taken off at the second and third joints, will root readily, placed behind a hedge or wall, on the north side, without any protection whatever. Insert them two inches apart, and one inch deep, in soil of a light, sandy texture, and they will root in a few weeks. Take care that all damp leaves are removed as soon as they appear.

To produce a bed of choice pansies, select a north aspect, with a cool bottom; soil of medium texture, and moderately enriched, should be preferred for the production of large flowers. Keep the soil frequently stirred around them, and be careful that the border is free from wireworm. If the plants are put out in September, they will be established before winter; and I have frequently found that plants so treated get through the winter quite as well as those coddled in frames. As their propagation is easy, depend exclusively upon young plants for the following season's bloom. Seeds should only be saved from beds of selected flowers possessing the best qualities; for, it is only by following this up that improved kinds to any extent can be obtained; and, as seed is readily produced, it is not worth while saving that from doubtful or indifferent sorts.—(*Gard. Chron.*, 1849, p. 693.)

On the Management of Fruit Trees.—The present being the most important time of the year, as regards the planting and root management of fruit trees, a few remarks on the subject may not be inappropriate, it being one of the branches of gardening in which there is still much to learn, and likewise much to be unlearned of the practice of our predecessors, as regards deep borders and the general system of management; but science and practice now demonstrate that a well-drained bottom, and a moderate quantity of soil, is sufficient for the proper cultivation of fruit trees.

But in the following up of this system, there are still many errors committed, such as digging out pits in soil that is not considered exactly suitable for the growth of a given tree, and filling the said pit with the requisite soil. The first evil that results from this system of planting is, that the trees grow luxuriantly for a few years, until they come in contact with the original soil; and then the hopes of the cultivator are destroyed, just when the tree is beginning to bear, by the appearance of some of the evils to which fruit trees are subject. The second evil is, especially if the situa-

tion is at all damp, that this mode of planting encourages a degree of moisture about the roots, as the water from the original and undisturbed soil collects in that which is more porous, which superabundance of moisture tends to lay the germ of future disease and unproductiveness. When the natural soil is not considered suitable to plant young trees in, and the expense of a new border not gone to, the requisite soil ought to be trenched in, and well mixed with the natural soil to the depth of two feet or two and a half. As to the first planting, the roots ought to be regularly laid out, care being taken not to plant them too deep. Some cultivators recommend planting on the surface, which may have its advantages; but, it by no means obviates the downward tendency of the roots. But the object of the present paper being to point out the advantages of regulating the growth of trees by a system of lifting, it is unnecessary to dwell on the different ways of planting.

Of late years it has become evident, that the old mechanical modes of managing fruit trees, are attended with so many serious disadvantages, that more natural ones are beginning to be appreciated. The majority of gardeners now endeavor to understand the reason of every practice, and every effect upon scientific principles, so that, at present the march of gardening knowledge is very rapid, and the old and fondly cherished opinions of former days are being fast cast aside; and among these are the old systems of pruning and training fruit trees, which, in general, is only a system of unnatural malformation, by which all the laws of the vegetable system are greatly embarrassed, circumscribed limits being set to the branches, whilst the roots are allowed to roam at liberty, untrained and unnoticed. The limits of the branches being obtained by a course of pruning, that is, not according to the laws of vegetable physiology, or the dictates of reason, if the operator was only to employ that important key to the proper application of the principles of horticulture, the thought must at once strike him, if I bestow such trouble on the branches of my trees, I must likewise turn my attention to the roots, there being an inseparable connection between their actions in their natural and unrestricted state; the absorbing power of the roots being in proportion to the decomposing power of the leaves; but, by the cutting system, the superficial extent of the roots is greatly increased above the relative proportion which they ought to bear to the branches, and as soon as the natural habits are encroached upon, the grand and complicated laws upon which the vegetable system works, are deranged; and how can it, then, be expected that nature's laws will be followed in the production of fruit. Imitating nature is the principal point on which the gardener's success depends.

Some suppose that by pruning the branches, they lessen the power of the root, but winter pruning has not the least tendency to it, from the rule that the sap vessels are filling all the winter by the attraction of the buds, so when the tree is pruned, all its remaining parts are well stored with sap, to supply the first demands of the few buds retained, and as soon as a sufficient supply of light and heat is produced, the growth starts with rapid vigor, whereby the roots are again set in motion to supply a gross and unpro-

ductive growth; pruning only tends to cause a rapid circulation of the sap, the effect of which is, that leaf-buds are formed instead of flower-buds. The growing season is the only time that pruning can be successfully employed to check the growing of the root, as then the cause is removed. It is upon physiological facts, such as the above, that successful cultivation depends; for, unless proper means are employed to limit the amount of gross young wood, all other means, such as expensively prepared borders, and favorable exposures, will be unavailable as regards either the quantity or quality of the fruit, for any length of time. The ameliorating powers of the gardener for that purpose are many; but I consider the system of regulating the growth by frequent and judicious transplanting, the most certain; and, when aided by proper stocks, the greater part of the difficulty so often complained of, in bringing trees to a bearing state, would be obviated, besides the loss of time. By early and frequent transplanting, fibrous roots are secured instead of rank growing ones. The frequency of the transplanting must be regulated by the growth of the trees, which will greatly depend on local circumstances and constitutional habits. Trees so treated will require very little pruning; but, in the earlier stages of their growth, a certain amount is necessary, to enable them to be trained to their required form; but, as soon as the tree is formed, it ought to be lifted and carefully planted, having its roots regularly laid out, and any that show signs of rankness stopped. The whole art of transplanting consists in the preservation of the spongioles. The roots of young trees thus dealt with for several times, are in no danger of getting down into the subsoil, or from atmospheric influences. And if, at any time, it is not convenient to transplant them, or if they are becoming fully weighty to manage easily, the extremities of the roots can, by a very small amount of trouble, be examined, as their exact position will be known.

The benefit of root pruning upon established and unproductive trees is now without doubt, the excessive vigor of growth being at once stopped, and whatever tends to diminish rapid vegetation without affecting the health of the tree, is favorable to the production of fruit-buds. But, in the root-pruning of trees that have been mismanaged, or of long standing, there is one point that I must here recommend, which is the season previous to the general pruning to cut a few of the roots, by which means they will be supplied with fibrous roots, by the aid of which they are greatly assisted the succeeding season.—(*North British Agriculturist*, 1849, p. 362.)

Cultivation of the Hollyhock.—The hollyhock, like a useful custom in the form of dress, is subject to be assailed by the ever restless fashion of the times, when its fate for a time may be sealed, until a sober conviction of its utility ushers it again into favor. Such has been the fate of the hollyhock: to be alternately praised and as often decried, to make room for something else, having probably only novelty for its chief recommendation, proving that,

“fashion,

However ridiculous, still is followed.”

The hollyhock after lingering in exile among the outcasts of old associations, and its name immured in musty records, or striving for existence, half

buried among old shrubberies for nearly half a century, is again being introduced on our modern lawns, and the walls of our gardens, to adorn by a profusion of flowers those situations it is so well calculated to clothe and decorate. The selection of good sorts should be the primary consideration of the grower. The most desirable varieties have been shown to possess stiffness of petal in connection with the form of the flower. I have attempted to raise them at various times, from imported seeds, but have as often been disappointed, and therefore would suggest the propriety of procuring plants of decidedly good varieties. In planting hollyhocks, to give effect to their majestic appearance, a tutored eye will readily discover the position they should occupy, as to grouping and arrangement. We could view with pleasure, scattered groups or solitary plants rising by the sides of the falling cascade, or the base of rugged rocks, by the side of the rippling stream: and when passing over the wide-spanned bridge we could admire its entrance guarded by hollyhock pillars, well contrasted, and closely planted round, and supported by invisible iron stakes. Such pillars may stand singly on the lawn, on either side of the garden doors, and who would deny them a place by the side of the cottage gate! Such vacant places as are sometimes to be met with on garden walls, may also be planted with them, where they have a neat appearance if properly nailed to the wall, and afford an excellent situation for obtaining properly refined seed.

The propagation of the hollyhock is easily effected by cuttings, taken off at any time they can be procured, and rooted in a cold frame; this is the most effectual method of perpetuating the finer sorts. The seeds also carefully gathered when perfectly ripe, and retained in the calyx until April, when they may be separated and sown in a well prepared border, in a few weeks they will be ready to transplant, the first favorable opportunity, to the places where they are to remain to flower, as too often transplanting has a tendency to weaken the plants. Where the seed is saved from good flowers there is no necessity for planting out the seedlings into nursery rows to test their merits, as I have invariably found that single flowers seldom come from seed well selected. In planting out hollyhocks where they are to remain, the ground should be well prepared with a good rich soil to ensure a perfect bloom. A sufficient number of stakes should be provided to fasten them to, as they grow. The great prejudice against the plant is the great stake that is required for its support; thick wooden poles are certainly, where they are not hid by the foliage, any thing but ornamental. I received some iron stakes from Messrs. C. D. Young & Co., of Edinburgh, for dahlias, which if proportioned to the length of 6 to 8 feet, would answer admirably for the support of hollyhocks, and silence the only plausible argument against their more general culture.—(*Id.* 1849, p. 361.)

Plumbago Larpenae.—In a previous page we have incidentally mentioned this rather new plant, about the merits of which there appear to be various opinions among amateurs and practical cultivators. To show in what estimation it is held, we quote the opinions of three different correspondents, and leave lovers of plants to judge of its real merits for themselves:—

It grieves me, Mr. Editor, to think that while the want of a good blue

flowering plant, for bedding-out purposes, is so generally admitted to be a desideratum, the experience of past seasons with *Plumbago Larpentæ* has not emboldened some of your correspondents to declare in its favor. For who that has seen it will say that *Plumbago Larpentæ* is not "divinely, beautifully blue?" Its habit, too, for bedding-out purposes—is it not all that the most fastidious could reasonably require? And in point of hardiness, it is, I am confident, equal, if not superior, to most of our parterre favorites. It adds much to my grief also, that I am unable (although I have given it what I conceive to be a very fair trial, and seen it tried elsewhere,) to say more for it, as a bedding-out plant, than what is implied in the significant words—

"Alas, poor Yorick!"

As a pot plant I have every reason to believe that it will ultimately prove itself worthy of all that has yet been said in praise of it. Not that I have been very successful in cultivating it myself, but having had frequent opportunities of seeing the original plant when first brought into the nursery of Messrs. Knight and Perry, I recollect no plant with whose general appearance I was so thoroughly fascinated, or which was so generally admired by all who had then the pleasure of seeing it in this its pristine glory. What treatment it had previously received I know not; but it would seem, from what I have been able to glean respecting its successful culture, that to induce it to bloom profusely, it must be grown in a light sandy soil, in very small pots, and kept in a rather moist heat. By this treatment I understand that many [who?] during the present season have succeeded in bringing it to a very satisfactory state of perfection. I make these few remarks in behalf of *P. Larpentæ*, believing that in many respects it has been harshly dealt with, and in order, if possible, to stem, in some degree, the strong reactionary current now running so violently against it, threatening, in many instances, even its total annihilation.—(*Gard. Jour.*, 1849, p. 709.)

When you have a small space to spare in your *useful periodical*, I would like to see inserted a notice of the plant *Plumbago Larpentæ*. Your readers who belong to the gardening world all know that this plant is of late introduction into this country, and no doubt, may have seen the character of the plant placed in the list of *unfavorables*. In the months of August and September of the present year, I have seen seven specimens of the plant at horticultural shows, and none of them pleased me; they were either too much *drawn*, scorched to brownness in their leaves, wanting in the abundance of flowers, unshapely in their habit of growth. The sum is, they all had serious faults.

Now for the redeeming qualities. I am much interested in Chinese plants, so many good things have come from that country. Last spring I got a small plant of *Plumbago Larpentæ*, and found that summer was half over before it showed much growth; indeed, it has not showed rapid growth except in September, when it came away with vigor. The plant has been in a hothouse for five weeks past, the heat ranging day and night between 75° and 50° of Fahrenheit's thermometer. The plant is giving great satis-

faction, in a pot 11 inches over, the same in depth, and forming a handsome beehive cone, about a foot high above the pot, and projecting compactly over the rim. It is covered with hundreds of its azure flowers. As the flowerets are of short duration, two or three minutes are required daily to pick off the old ones. The plant well deserves this attention.

Many plants of recent introduction are recommended for *bedding out*, and the *P. Larpentæ* among the rest; this property of the plant I doubt, but will say, a partial shade above, plenty of *side light*, and air, with heat, rather above temperate, may form the habitat. When speaking of *plants*, I will *note* another plant in flower with us at the present time. It is the *Buonapartia Juncea*, (*Littæageminifloræ*) a flower well known in botanical collections, by its stiff rushy habit, although more graceful than the common rush bush, by the handsome bend of its rushy leaves. This is the first time that the *Buonapartia* has flowered with us; the flowers are liliaceous, and have not much beauty, being of a dingy white; however, the six stamens and anthers have some show. The flower stem is 12 feet high, and 5 inches in girth.—(*North British Agriculturist*, 1849, p. 362.)

Of this plant too much was at first expected, and now having been extensively grown and flowered for one year, has been pronounced by most cultivators as worthless. Being a native of Shanghai in China, where the thermometer often falls much lower than in this country, it was supposed to be hardy, and would prove a great acquisition as a blue bedding plant; that such however will not be the case, seems now beyond all doubt. In many parts of the country plants have been planted out in the best situations, and scarcely put forth a bloom; even for the common greenhouse it seems too tender, as may at once be readily seen from plants in such situations assuming a reddish stunted appearance; an intermediate house seems to suit it best. The following particulars of a plant grown here, may perhaps be interesting to some of your readers, and may be the means of saving the species from a fate which, by almost universal consent, seems awaiting it, viz., being hewn up as a cumberer of the ground, and cast into the rubbish heap. In May last, my oldest plants, being nearly cut to pieces for the purpose of propagation, I had a nicely rooted cutting selected and carefully potted into a four-inch pot; it was grown in stove heat till about the end of June, and frequently shifted till the middle of July, when it received its last shift into a shallow pot or pan 8 inches across, and 5 inches deep. The house in which it has grown since June has been kept rather close, but no fire heat used till the middle of September, when a gentle fire was kindled once a day. It is now one foot high and six feet in circumference, with 147 heads of its beautiful light blue blossoms, each head having from 2 to 5 fully expanded flowers, and is indeed a beautiful floral object, being of the easiest cultivation. It has well repaid the little trouble bestowed upon it, and having still hundreds of unexpanded blooms, the plant is expected to flower till past Christmas; if such be the case, it will prove invaluable for cut flowers, at a time when such are much in request.—(*Id.*)

Bedding-out Plants.—I am glad to observe a discussion going on in the

Journal about the plants best adapted for flower gardening, and as in many places a good autumnal display is not of the least importance, the following are a few of those I have found most suitable for that purpose. The two Cupheas, *C. platycentra* and *C. strigillosa*, are both good; and if the latter is more showy at a distance, as it undoubtedly is, still the former makes a capital bed for closer inspection. Here it is planted on a raised circular bed, in a somewhat airy situation, and is generally admired. *C. strigillosa* I find to be improved by an edging; *Agathæa cælestis* suits very well, its charming *blue* flowers contrasting agreeably with those of the other, and gives the bed a more lively appearance. But Kay's *Calceolaria* makes the best display of all the *yellow* flowering plants that I have seen, producing such magnificent corymbs of flowers, well above the foliage. The *scarlet* lobelias are now the finest masses of that color; *scarlet* geraniums get somewhat too leafy in our beds at this season; however, those in vases are still very fine. Here we have these lobelia beds covered with verbenas of the same color, so that without having a blank in the summer their season of beauty is considerably extended in the autumn, as about the time the verbenas give way the lobelias are just in their splendor. *Phlox Drummondii*, as a *red*, comes in well, if a good variety is got, as it flowers abundantly. *Lythrum alatum*, from the distinctive character it imparts to a bed, deserves to be patronized; heavy rains dash the flowers off a good deal, but from having such an abundant succession that is not of much consequence; but at this season something is required, that there is no mistake about seeing; good strong colors are what are wanted, and in that it is deficient. As to *blue*, *Salvia chamædryoides* is the best, and if strong plants are put out in good time it makes a very fine bed; but all blue show best on gravel. We have had a very fine clump of *S. patens*; the bed is large, being in our principal flower garden, which is exposed to occasional *not gentle breezes*, and on such occasions the young brittle shoots of such plants are apt to get broken; being upon grass, an edging of the *Calceolaria rugosa* was put round, to relieve the cool color of the blue, and give expression to the bed, and still more to lighten it up and afford protection. Plants of the *Tropæolum canariense* were introduced, planted some four feet apart, and answered admirably; in the height of the season the whole had a very brilliant appearance, but the colors would have blended more harmoniously had that of the canary flowers been deeper—more of an *orange*. At the present time, when the *Tropæolum* has almost wholly taken possession of the bed, it is still gay, but looks best at a distance. For a *white*, a plant received here under the name of *Iberis gibraltaraica* surpasses all; the leaves are linear and silver-edged; flowers and odor like the common sweet *Alyssum*, and grows some ten inches high; at a distance the clump appears a complete mass of white. Variegated geraniums should not be omitted; the old *scarlet* suits best for late work: should that exhibited by the Messrs. Lee this season, and of which report speaks highly, prove equally hardy, it will be a great acquisition. These, with such indispensables as heliotropes, crimson perpetual roses, with many others, if skilfully managed, will be found very useful in prolonging the beauty of the flower garden.

In reading your valuable journal for the last few weeks, I have been very much pleased with what has been written on bedding-out plants,—a subject, though simple, yet second to none; for what can be more beautiful than a well-arranged flower garden? In your last week's journal there was a good list of *blue* flowers named, but very few *yellows*; I therefore give you the names of a few yellows which I find to answer well as dwarf yellows. The *Sanvitalia procumbens*, though an annual, is very hardy, and if sown in March, will flower as long as any plant that is bedded out. *Oenothera maculata* and *viparia* are very good; *maculata* shows well at a distance. Then as *pinks* the *Oxalis floribunda* and the pink geraniums are surpassed by none; and as a *purple* the double groundsel, if propagated from cuttings, is a fine thing. As mention has been made of the standard geraniums, I will proceed to give you a simple detail of them as grown at Courteen Hall. We have in this place one hundred and twenty standards from three to nine feet high, and many of them measure from two to three inches round the stem, and have had this summer from fifteen to twenty very large heads of flowers expanded at one time. The sorts we find best are Smith's giant *Scarlet*—but we have many of all sorts. The *fuchsias* we have are, for the most part, *Globosa fulgens*; and *Corymbiflora fulgens* makes a beautiful standard. We train the heads of *Corymbiflora* quite full; and I have had one plant so trained this summer with twenty-nine heads of flowers. *Fuchsia serratifolia* makes a good standard trained in this way. The *Cassia corymbosa* and *Brugmansia lutea* are very beautiful as *yellow* standards. The *Brugmansia* we train flat; and we have had one plant this summer which had 107 expanded flowers at one time, and it is now showing, I think, nearly as may.

Much has been said, and much remains to be said, on bedding-out plants. I can only bear testimony to what has come under my notice. Various are the opinions of this and that plant; and I think soil and situation are very important. As regards the color of beds in flower-gardens, I have tried several; part of what I approve of I enumerate. I object to neither annual nor any other plant, if I can get them to have the desired effect. *Heliotropium peruvianum*, with its varieties, ought not to be despised, though it looks rather dingy, with somewhat the scent of a cherry-pie. I keep it close pegged down; and it does well with me. *Lobelia erinus*, *compacta*, *racemosa*, for small beds or edgings round other beds, do very well. *Verbena venosa*, though little thought of, I have grown for years. Generally speaking, it does well under all circumstances; I have had it to stand the winter. *Ageratum mexicanum*, though not a very bright color, has a very good effect. *Plumbago capensis* I have had both upright and pegged down; and it makes a very good bed. *Lupinus pubescens* does well at a distance. The *blue Anagallis*, grown either in beds or trained down the sides of a rustic vase, has an imposing appearance. *Cineraria amelloides* does well with me; and were it better known, it would be more appreciated. *Salvia patens* and *S. chamædryfolia*: I prefer the latter, as its habit and foliage are better than *patens*. I have grown *Comelina tuberosa* for years as a bedding-out plant; and, though not of good habit, I think it

worthy of a place in the flower garden, on account of its pretty *blue* color. The annual *blue* branching larkspur has eclipsed all my blue flowers this season. I had a bed of it from two to four feet high. Last season I had it in bloom up to November; but the early frosts this season made an end of them by the beginning of October. I cannot make out why blue flowers are so scarce.

Many of your readers have doubtless experienced that in flower gardening, variety with many ladies is esteemed as being especially charming; so much so, that with some, duplicate beds would be regarded as undesirable. Where such is the case, it will be readily admitted that there is a difficulty in obtaining suitable counterparts to many things which are of themselves inestimable, and being so cannot well be excluded from the parterre. Suppose, for example, it is given to arrange a garden of any dimensions where two beds of each color used is indispensable, yet no two beds of corresponding colors shall be of the same variety, nor if possible of the same genus: take, for instance, the case of two yellows being required, and *Calceolaria viscosissima* adopted as one, what have we in point of habit and color, apart from *Calceolarias* altogether, to match it? An equal, if not a greater, difficulty obviously exists in the same way respecting many other things, which I need not here enumerate. Would that some of your experienced and intelligent correspondents would direct their attention to this point! By so doing, they would confer a boon upon many whom the subject has much perplexed. In addition to the many excellent things which have been already nominated in the *Journal* as being eminently qualified to become the representatives of their respective colors in the parterre, allow me to submit *Anomatheca cruenta*, [This is good,] which, for a small low bed of a *red* color, if planted thick, is very gay and effective; with me it is in bloom from the end of May till the beginning of October. *Oenothera macrocarpa*, for a low bed of a light *yellow* color, is to my mind far from being without merit. *Statice sinuata* forms a very neat and effective bed, and, in my estimation, as a bedding out-plant, is second to none of its color. In recommending these, let me add *probatum est*.—(*Gard. Jour.*, 1849, p. 708.)

What is Ripening the Wood?—The question may be better put now than at any other season, for now is the time when ripening must take place, if at all. One would think that the question answered itself; but our correspondence tells us that many persons have no distinct notion of what ripening is, or how it is to be accelerated, or how prevented.

On previous occasions we have pointed out the unexpected fact that many plants cease to be tender, that greenhouse shrubs may be frozen with impunity, and that others will endure our winters with no risk, provided their wood is ripe. We know that the winters of Persia are far more severe than ours, and yet the vine and peach sustain no injury in Persia, because in that country the wood is ripe; the same plants are frequently killed in England with half the amount of cold—here the wood is seldom ripe. The most important, then, of all autumnal work is to look to the state of the wood.

The ripening process consists in a gradual and complete removal of superfluous water ; and in a perfect conversion of fluid, crude, organizable matter into the more solid substances which represent it during winter. These two processes, although essentially distinct, are nevertheless brought about by the same agents and may be regarded as one. Superfluous water is driven off by heat, light, and currents of air acting upon the surface ; sclerogen, starch, gum, resin, and other solid secretions are in like manner formed by the force exerted upon vegetable vitality by heat and light, and by the carbonaceous matter derived from the air. If these agents are insufficient the wood remains soft and watery, and the solid secretions are so incompletely elaborated that they possess little of the stability natural to them in a complete condition. Heat and light together, in the presence of air, if possessing the requisite power, solidify all the tissues and all their contents, keeping up the play of chemico-vital action until the process of assimilation and elaboration is terminated.

The effect of this ripening process is by no means limited to giving plants a power of resisting cold ; that is but an incident in the operation. The main object is to provide an abundance of food, of the proper kind, for the instantaneous nutrition of the parts which are about to appear in the succeeding spring, and also, in many cases, to the production of the embryo flowers upon which the hopes of the gardener are founded. It is literally true, that not a flower will appear upon a camellia, or an azalea, or a pear, or a peach, or a strawberry, or any other tree, shrub, or herb, unless there has been such an amount of heat and light, and free exposure to the air, as will have caused nutriment in abundance to be formed, and the young and tender, nay invisible scales, which come together and make the flower, to arrange themselves in the order assigned to them by the Creator.

This explains the great advantage of a dry, warm autumn to our strawberry beds, which then produce an abundant blossom in the following year ; while those who coddle and nurse their plants in cool and shady places, where they are always growing, have leaves in plenty, but not a fruit. This explains why camellias flower so ill in close greenhouses facing the north, or darkened by vines, where they have neither heat, nor light, nor air enough ; and why, under circumstances the reverse of this, a bright sun, its accompanying heat, and the constant currents invariably present in the open air, flower-buds appear in crowds.

In England we have little idea of the extent to which this ripening should go ; it is doubtful indeed whether the wood of exotica is ever ripened in England. We are told that in hot latitudes the wood of the peach and vine becomes as hard as mahogany, and as brittle, up to the points of the shoots. We know that numerous shrubs, especially of the race called hard-wooded, never become in cultivation what the samples of them brought from their natural abodes have led us to expect. Among New Holland plants this is more especially the case ; we see them in our herbaria loaded with blossoms ; in our gardens we are satisfied if they bloom at all. It is said that the *Grevilleas* and *Hakeas*, and *Persoonias* are in some instances sheets of white or yellow, or red ; we are too happy if we see their leaves.

In cultivation is to be found a shrub, in little esteem, called *Xylomelum occidentale*; a correspondent, writing from the Vasse River, where it is wild, speaks of it as "a most beautiful tree; the blossoms are pure white, and their drooping soft wreaths, blended with the stern dark green leaves, are indescribably elegant." All that is wanted to ensure the same appearance here is to ripen the wood as it ripens in Western Australia. Perhaps no shrubs in existence are equal in perfect beauty to the *Verticordias* and *Chrysorrhœs* of Western Australia; the brilliancy of their flowers when dead and dried is still metallic, and their number is countless among the dark green heathery leaves. We shall never see them thus till their wood is well ripened; perhaps we may never see them in any kind of beauty, for it may happen that art is unable to supply the requisites for perfect maturation. Let us, however, do what we can.

Gardeners may rely upon it that they cannot neglect any means of ripening perfectly every perennial plant which they may cultivate. They may be assured that no amount of ripening which they can possibly secure will be excessive; on the side of excess they cannot err. Let them, then, now that the time has come, put in action every contrivance which their circumstances can furnish. Spare lights over wall trees, hand-glasses over ripening herbs, warm dry places for potted plants of all sorts; heat, light, and abundance of air secured by whatever means may be at command. These are what they must rely upon for next year's crop, and without them all the cultivation in the world will be of small avail.

But there is a difficulty in the way. Heat and light are dangerous powers, and will destroy life as well as invigorate it; and there is always a risk, that in pushing the ripening process to its limits by artificial means, plants may perish under the operation. How to guard against this contingency is what no rules can teach. Here the mere art of gardening comes into requisition, and experience alone must be appealed to. No gardener, however, who deserves the name, can have the least doubt as to the way in which the difficulty can be met.—(*Gard. Chron.*, 1849, p. 547.)

Hints for Amateurs.—The following are select, distinct, pot and bedding-out plants, of various colors, for an amateur's garden, and are easily kept in a frame or pit during winter:—

Geranium Unique,
 " La Belle d'Afrique,
 " Lady Mary Fox,
 " Cottage Maid,
 " Queen's Bouquet,
 " Victoria,
 " Sidonia,
 " Lady Plymouth,
 " Ivy-leaved, white,
 " " pink,
 " new gold-edged,
 " new silver-edged,
 " Tom Thumb,
 Salvia patens,

Salvia splendens,
 " chamædryoides,
 Campanula fragilis,
 " nobilis,
 Nuttalia grandiflora,
 Nierembergia filicaulis,
 Cuphea miniata,
 " platycentra,
 Aster bellidiflorus,
 Anemone japonica,
 Heliotropium Voltaireanum,
 Gazania uniflora,
 Mimulus Conductor,
 Small Chusan Chrysanthemum,

Esothera macrocarpa,
Lantana crocea,
 " *Sellowii*,
Chironia Fischeri,
Anagallis carnea,
 " *Brewerii*,
Saponaria ocymoides,
Silene Schafta,
Alyssum variegatum,
Potentilla Macnabiana,
Viola Neapolitana,
 Double Purple *Jacobaea*,
Lobelia Erinus compacta,
 " *cardinalis*,
Gaillardia aristata,
 " *picta*,
Phlox Van Houttei,
 Double scarlet *Nasturtium*,

Double blood-red *Nasturtium*,
 " orange "
Potunia Prince Albert,
 " *splendidissima*,
Verbena Emma,
 " *Defiance*,
 " *Avalanche*,
 " *Lady Brackenbury*,
Calceolaria amplexicaulis,
 " *Kentish Hero*,
Fuchsia formosa elegans,
 " *Purity*,
Plumbago Larpenae,
Zauschneria californica,
Pentstemon cordifolius,
Chelone mexicana,
Sedum Sieboldi,
Mesembryanthemum polyanthum.

ART. II. Foreign Notices.

ENGLAND.

Dahlias and Dahlia Exhibitions of 1849.—The dahlia season in England has been exceedingly favorable, and the exhibitions have been numerous, well attended, and abundant in the very finest specimens. The system of offering liberal premiums, adopted by various successful cultivators, in addition to those offered by the several floral societies, has added new zeal to the principal amateur fanciers, and induced a better cultivation of the plants, and the production of a greater number of new varieties. The floricultural journals are filled with the reports of the exhibitions, and, as usual, we copy the names of the winning flowers of a few of the principal societies, which will show which are the most successful varieties:—

NORTH LONDON FLORICULTURAL SOCIETY.—Best twenty-four blooms:—*Beeswing*, *Conspicua*, *Richard Cobden*, *Queen of Roses*, *Antagonist*, *Louis Philippe*, *Mrs. Anderson*, *Gen. Vyse*, *Mr. Seldon*, *Golden Fleece*, *Scarlet Gem*, *Privateer*, *Princess Radzville*, *Standard of Perfection*, *Yellow Standard*, *Admiral Stopford*, *Imbricata*, *Toison d'Or*, *Emperor*, *Mrs. Edwards*, *Shylock*, *Triumph*, *Marchioness of Cornwallis*, and *Capt. Warner*, to Mr. Bragg, Slough.

NORTHAMPTON DAHLIA EXHIBITION.—Best twenty-four blooms:—*Golden Fleece*, *Crocus*, *Mrs. Shelly*, *Essex Triumph*, *Beeswing*, *Princess Louisa*, *Lady St. Maur*, *Marquis of Worcester*, *Mr. Seldon*, *Toison d'Or*, *Nonpareil*, *Miss Vyse*, *Marchioness of Cornwallis*, *Scarlet Gem*, *Black Prince*, *Earl of Clarendon*, *Yellow Standard*, *Princess Radzville*, *Shylock*, *Dreadnought*, *Berryer*, *Privateer*, *Miss Weller*, *Violet Perfection*, to Mr. Holliday.

CALEDONIAN HORTICULTURAL SOCIETY.—Best twelve blooms :—Marchioness of Cornwallis, Duke of Wellington, Crocus, Beeswing, Grenadier, Mr. Seldon, Scarlet Gem, Purple Standard, Princess Radzville, Sir E. Antrobus, Empress of Whites, and Boule de Feu, to Messrs. James Dickson & Sons.

SURREY AMATEUR DAHLIA SHOW.—Best twelve blooms :—Toison d'Or, Essex Triumph, Julia, Dr. Graham, Miss Vyse, Black Prince, Mrs. Shelly, Sir Robert Peel, James Girling, Shylock, Lillywhite, to Mr. Kirkpatrick.

Fancy Dahlias.—The following are sixteen of the winning flowers in this interesting class, viz :—Mrs. Shaw Le Fevre, General Cavaignac, Lady Granville, Triomphe de Madeburg, Smith's La Reine, Emperor de Maroc, Picotee, Madame Wachy, Charles Perry, Sunbeam, Striata Perfecta, Keepsake, Jenny Lind, Remembrancer, Miss Blackmore, and Conspicua.

Seedlings of 1849.—Prince Edward, a scarlet; Floral Beauty, crimson and white, (fancy;) Mrs. Jewett, white, tipped with purple; Proctor's Elizabeth, blush, with rosy purple stripes; Miss Compton, bright red and white; Keynes's Magnificent, rosy lilac; Sir F. Bathurst, (Keynes's) crimson; Legg's Premium, purple; Earl of Clarendon, orange; Sylph, a white ground variety; Aurantia Campacta, bright orange; Gaiety, (Keynes's,) yellow, mottled with red; Beauty of the Grove, very fine, dark. These were awarded *first class certificates*, and are all that were shown of any great merit.

The amateur will be at no loss to make out from the above a desirable list of all the choicest additions of the year.—*Ed.*

ART. III. Domestic Notices.

Horticulture in Illinois.—When a native of Massachusetts comes to Northern Illinois, he misses the high, rocky granite hills, and the evergreen trees of New England. Pine trees are found near Chicago, and are said to be in this county, but I have never seen any of them. The only evergreen tree which I have met with, is the Red Cedar. Our forests are chiefly composed of oaks, walnuts, (black and white,) hickories, (including what is called the Ohio hickory, a large kind of fruit,) elms, ashes, maples, poplars, Kentucky coffee tree, lime tree, &c. &c. Our wild fruits are plums, crab apples, paw-paws, nuts, grapes, strawberries, gooseberries, mandrakes, &c. &c. As to wild flowers, we have them from early in the spring to late in the fall. I have seen asters and *viola pedata* in bloom within a few days, beside other compound flowers; and I suppose I could still find gentians in flower. Violets, of the kind which I have named, can always be found in bloom here in the fall, but not with you, I think. I do not remember ever finding them at that season near Salem. I intend, at some future time, to give you a list of some of our earliest flowers, with the time of blossoming. But few peaches have been raised near here this season; last year they were very plenty. Apples are not so plenty as they were the last year.

Peaches are a very uncertain crop with us—they will fail say about 3 years out of 5 ; the trees are great growers and the buds are generally winter killed. Apples and plums will probably do well here, but pears are apt to blossom too early, and the sun is, I think, apt to be too hot for cherry trees ; in fact, it troubles some of our apple trees so, that, on the south side of the trunk and limbs, the bark turns black and dies, and some of them will be killed by it. In your last number, you say the Julianne pear is “ a very vigorous grower.” (I quote the substance, without looking at the article.) What I have received for that kind, has always been a sickly looking and growing kind, and the trees have always died in a year or two ; but I have a graft of it on an apple stock, (not in the root but on the trunk,) which grows well, and I hope to see the fruit in a year or two. What was sent me as Domine Dull plum, blossoms very full every year, but, like the Cherry plum, the fruit is never set, or but very few, which soon fall off. The tree is very vigorous, and the kind is said “ to bear to a fault.” We have fruited but few of our trees, although we have had some of them seven or eight years. Golden Russet—one tree is true—one from another source proves to be the Yellow Siberian Crab, (a slight mistake ;) Monstrous Pippin proves to be a medium sized *summer* fruit, (do. do. ;) Bartlett pear will probably prove to be Passe Colmar, and so I suppose it will be with the majority of one lot of trees. I have no confidence in any of the labels. Our samples of Golden Russet and of Ribston Pippin, were very fine for the first year of bearing. Red Siberian Crab bears well, also the yellow,—the latter tree is our earliest fruit tree to leaf out in the spring.—*Yours, respectfully, Edward S. L. Richardson, Kendall, Kendall Co., Ill., Nov. 1849.*

ART. IV. *Exhibitions of Horticultural Societies.*

New Bedford Horticultural Society.—The third annual exhibition of this society was held at the City Hall, on Wednesday, Thursday, and Friday, the 26th, 27th, and 28th of September, 1849. The report which has been forwarded by our correspondent, Mr. Crapo, is too long to insert entire, and we therefore copy the prefatory remarks of the committee, with the names of a few of the principal exhibitors of fruits and flowers:—

The Committee on Fruits present the following as their report:—

They have much pleasure, in the outset of their report, in being able to state, that the display of fruits on the occasion was excellent and far exceeded their most sanguine expectations ; for, in addition to the scarcity of almost every kind of fruit which has so generally prevailed the current year, the society has been deprived of the aid of many of its former contributors and most zealous cultivators, who are now absent from us, seeking a more *golden* harvest in other climes.

Notwithstanding, however, these and many other discouraging circumstances, which have attended the exhibition, the efforts of the society, in this department at least, have been crowned with success.

The show of pears, the standard fruit of New Bedford, both in appearance and extent, as well as in size and beauty, exceeded that of any former exhibition, and gave ample evidence that our soil and climate are well adapted to the successful growth of this most luscious and valuable fruit. Some of the dishes were indeed splendid, and the committee very much doubt if they have often been excelled at any exhibition. A very large dish of the Frederic de Wurtemberg from Mrs. Hannah Bates, the specimens of which were very large and handsome, and also a large dish of the White Doyenné from William T. Cook, of great size and exceeding fairness and beauty, especially merit this commendation. Dishes of the Flemish Beauty from J. H. Clifford; of the Beurré Diel, Le Curé, and Glout Morceau, from Joseph Clarke; of the Passe Colmar, from William Swift; of the Bartlett, Glout Morceau, Beurré Bosc, and Seckel, from James Arnold; of the Louise Bonne of Jersey and Napoleon, from Henry H. Crapo; of the Seckel, from William T. Russell; of the Glout Morceau, from John M. Howland, of Fairhaven; of the Duchesse d'Angouleme, from Henry Deane; of the Seckel, from William Rotch, Jr.; of the Bartlett, from Dennis Wood; of the Duchesse d'Angouleme, from Joshua Richmond; of the Wilbur, from E. Gardner; of the Napoleon, from William J. Rotch, and of the Capsheaf, from John Akin, merit especial notice for the great size and fine handsome appearance of the specimens, even where all were fine.

Of apples the show was limited, the season having been very unfavorable to their growth. The committee would here express the hope that the culture of this truly valuable fruit may be revived in our vicinity, and again flourish as in former years, believing as they do that all which is essential to success in this department of fruit culture, is merely for the zealous and devoted pomologist to take the matter seriously in hand. There were, however, some very fine specimens and worthy of special notice, among which were several varieties from William Almy's, of Dartmouth; a striped apple, very large and handsome, from Levi Jenny, Jr., of Fairhaven; and Hubbardston Nonsuch, and another variety without a name, from Samuel G. Hudson.

The show of peaches and plums was also limited, although some very fine specimens of each were upon the tables. Some noble specimens of the quince were also conspicuous, and especially three dishes of the Orange quince from Charles P. Sherman, the largest specimen of which weighed 18 ounces.

Of grapes the show was fair, both from the grapery and from open culture, and made a fine appearance, interspersed as they were among the other fruit, throughout the entire length of the tables. Of the Isabella, those exhibited by Henry Cannon were very large, both clusters and berries, and would perhaps be regarded as the best exhibited. Those from A. D. Richmond were also very fine, and, setting aside size, were perhaps fully equal to those exhibited by Mr. Cannon. Other dishes of this excellent variety of the grape, worthy of special notice, were from R. N. Swift, of Fairhaven, Charles W. Morgan, and R. R. Crocker.

FRUITS: From James Arnold, Esq., President of the Society, 23 varieties of pears, 12 varieties of grapes, peaches, and plums. From C. W. Morgan, 20 varieties of pears, 3 of grapes, several of apples, figs, &c. From W. S. Cook, 15 varieties of pears, plums, &c. From John Howland, 22 varieties of pears, 4 of grapes, &c. From H. H. Crapo, 44 varieties of pears, 4 of grapes, &c. From Jos. Clarke, 14 varieties of pears. From William P. Jenny, 16 varieties of pears. From William Swift, 12 varieties of pears. From R. N. Swift, 12 varieties of pears, grapes, &c. From J. M. Howland, 16 varieties of pears, several of apples, &c.

FLOWERS: James Arnold, C. W. Morgan, H. H. Crapo, J. B. Burges, Joseph Grinnell, Eliza Barney, John Howland, and William Rotch, Jr., were the principal exhibitors.

The decorations of the hall were tastefully arranged under the direction of the superintending committee. They were constructed almost entirely of the White or Swamp Cedar—*Cupressus Thuyoides*—forming partitions with arched passages, and of festoons of the Flat Club Moss or Ground Pine—*Lycopodium complanatum*. In this connection we would notice the suite of Chinese Garden Stands, which have been twice used with such good effect in our annual exhibitions. They were last year loaned and have since been generously presented to the society by Gideon Nye, Jr. Our obligations to him we take pleasure thus publicly to acknowledge.

New Haven County Horticultural Society.—The annual fair of this society was held in New Haven on the 26th of September last. An address was delivered on the occasion by Mr. S. B. Parsons, of Flushing, which is published with the report of the exhibition, and we shall notice it another time.

The show of flowers and fruits was very good, and several premiums were awarded.

Among the flowers we notice a new *Clerodendron*, exhibited by Mr. Leuchars, called *C. Sillimani*. It is a hybrid between *C. fallax* and *sinuatum*, having the foliage of the latter and the flowers of the former. It received a premium of \$3. C. Robinson, Esq., had the first premium for dahlias.

Of fruits there was a good display. Mr. S. D. Pardee, Drs. Monson, Dow, and Totten, and J. P. Whittlesey, were the principal exhibitors. The premium for the best was awarded to E. Sandford for the Louise Bonne of Jersey. Owing to the unpropitious season, but few of the New Haven seedlings were shown this year.

The committee, in conclusion, remark that "the exhibition of fruits which has been steadily improving at our annual fairs, has this year been superior to that on any former occasion—affording gratifying evidence that the operations of our society have in this, as well as in other departments of horticulture, been highly successful in improving the products of our gardens and orchards.

Many specimens of pears, peaches, and grapes, which this year received no premium, were far superior to those to which at previous fairs the highest was awarded.

In the department of pears, especially, it is believed that no society in this country can boast a more choice variety—for while we now cultivate all the foreign varieties of established reputation, our own citizens have added largely to the list of choice fruit by the production of seedling pears of great excellence. In addition to the large number of choice varieties produced by the late Gov. Edwards, the late Thomas Howell, Esq., of this city, raised at least one seedling pear (the Howell) which is pronounced by distinguished pomologists to be of the first quality. Several members of our society have within the last few years commenced the cultivation of pears from the seed, and specimens of their production were exhibited at this as well as at former fairs, which promise to add to our list of valuable fruit.

In the collection of grapes, too, great improvement has been recently made, as the exhibition this year fully demonstrated. Notwithstanding the backwardness of the season, well ripened and fine specimens were presented of several varieties of foreign grapes produced by open culture, while the beautiful clusters of choice fruit, raised under glass by Mr. Gabriel, would have commanded high premiums among the many competitors at the fairs in our large cities, as well as here where they had no competitor.

In respect to apples, while some good fruit of this description was exhibited, yet the mischievous apple worm, which abounds on our light sandy soil, will prevent our raising it, of the beauty and excellence with which it is produced in heavier soils, until a remedy against the ravages of this destructive insect is found.

With this exception, we may safely assert—for the exhibition this year has fully demonstrated its truth—that no section of our country can produce better fruit, or in greater variety, than the city and county of New Haven.”
(*Report.*)

Pennsylvania Horticultural Society.—The twenty-first annual exhibition of the society was held on the 12th, 13th, and 14th of September last, in the saloon of the Museum Building, Philadelphia.

The display, as usual, was exceedingly fine, particularly of plants and flowers, and the Report, in detail, makes a pamphlet of twenty-five pages.

The principal exhibitors of plants were the President, Mr. Cope, Jas. Dundas, P. Mackenzie, and John Lambert.

The designs were the most prominent feature of the exhibition, if we may judge from the report and the number of premiums awarded for the same. The principal of them are thus noticed in the report:—

By A. Henderson, gardener to E. A. Stevens, Hoboken, N. J.:—A design representing Mountain's Model of the Washington Monument, in height about 12 feet, and a square base of six feet, upon which rested the first or lower apartment, of about half its height, of a round form, constructed with thirteen arches according with the original states, the hewn stone of the masonry represented with lichens, other portions covered with moss; the second or upper division was formed of thirty columns support-

ing a dome covered with laurel, and within this apartment an equestrian statue of Washington, and above the dome a small temple enclosing a globe completed the device, which was appropriately ornamented with evergreen and flowers. This had the first premium.

An accurate model representing the western entrance to Castle Point, the domain of E. A. Stevens, at Hoboken, the stone work in like manner beautifully represented by lichens.

Also an accurate miniature representation of a twenty-five feet section of the curvilinear graperly on the same premises as the gate entrance; the sash were represented by acorns on wire, the glass by Gomphrena flowers; the original of these two latter devices was by Mr. Mountain. Mr. H. also exhibited a pair of tastefully formed wreaths.

By Peter Raabe:—An hexagonal arbor, an appropriate and simple device universally admired; the supports or columns were of red cedar entwined with wreaths of laurel interspersed with flowers, the open covering represented by similar wreaths. From above and within was suspended a cage containing a delightful canary warbler. It was carpeted with moss; within stood a rustic table on which were placed a tastefully formed basket of cut flowers and a bouquet; by the side of the table a rustic chair upon which lay a half-formed bouquet, gardener's knife and twine, and scattered about on the carpet and table cut flowers, conveying the idea of an horticulturist's employment. Also a beautiful basket of cut flowers. This was awarded the second premium.

By Joseph Cook:—A rustic lounge, completely enveloped with moss and flowers standing upon a floral carpet, in front of which was placed a table covered with moss and flowers. Also, a beautiful centre table with moss covering, and on the top displaying cut roses of the finest kinds. Awarded the third premium.

By Maurice Finn, gardener to John Lambert:—A square tower with spire rising to the height of about 16 feet, with evergreen covering interwoven with flowers. Also a handsome basket of cut flowers. Awarded the fourth premium.

By Patrick Gallagher, gardener to Miss Gratz:—A model of a secretary of original form completely enveloped in green and ornamented with flowers.

By Ben Daniels, gardener to Caleb Cope:—An evergreen model of a temple, a neat structure festooned with the choicest grapes. A beautiful bouquet and tastefully arranged basket of cut flowers, and a pair of wreaths.

The display of fruit was good for the year, and the variety, particularly of apples and grapes, quite numerous. Of foreign grapes, Mr. Buist exhibited about thirty kinds, among them the Gros Gromier du Cantal, Decan Superb, Raisin des Carmes, and Cochin China seedling. Of pears the variety was not large, but the following native sorts were exhibited by different cultivators:—Fulton, Lodge, Petre, Moyamensing, Haddington, Pennsylvania, Henrietta, Lewis, Spice (?), Wilkinson, Washington, Seckel, and one or two seedlings. Mr. T. Hancock exhibited 32 foreign varieties. Of apples the show was large. Mr. Hancock had 95 kinds and Mr. John Perkins, 63. The show of vegetables was large and excellent.—(*Report.*)

Cincinnati Horticultural Society.—This society held its autumnal exhibition on the 26th of September, and continued open four days. On Wednesday, according to the report of the committee which has just reached us, the exhibition was exceedingly fine, and gave general satisfaction to the members and the public; considering the unpropitious year for fruit, there was a fine show, and the display of plants and flowers was extensive and fine. The committee state that :—

“ This exhibition, although too late in the season for the display of many of our choicest fruits and most beautiful flowers, was yet, through the good taste and laborious exertions of some of our most distinguished horticulturists, far more interesting to the scientific amateur, and more pleasing to the mere looker on, than was supposed to be within the compass of our best exertions.

The floral department—a proper appreciation and encouragement of which in any community is a proof of the prevalence of a pure and refined taste—was eminently attractive, and gave striking evidence of care and skill—of laborious exertion and minute attention—on the part of the exhibitors, honorable alike to their mental and physical characteristics.

The decorations were of such a kind, and arranged with such good taste, as to produce a singularly pleasing effect. The great hall in the Masonic buildings in which the exhibition was held, is 115 feet long, 56 in breadth, and about 24 feet high. At the entrance there was a short avenue of cedar trees, terminated by two Doric columns supporting an arch covered with evergreens and decorated with flowers and wreaths; a thicket of evergreens and large greenhouse plants extended from the columns to the walls. In the centre of the hall and extending about two thirds of its length, was the principal table, on which the fruits, the smaller decorative designs, many greenhouse plants and various flowers were arranged. Against the wall on each side was a table of about the same length as that in the centre. The one on the south was appropriated to vegetables and greenhouse plants, that on the north to flowers, ornamental devices, and plants of various kinds.

In the centre of the south aisle, Mrs. Heaver's ornamental design was placed, and on the north aisle Mr. Jackson's. The former sustained well the reputation for good taste and skill in ornamental designs which Mrs. H. acquired at the last year's exhibition. It was a square Gothic temple with pinnacles, flying buttresses, and other regular Gothic attributes, with a spire, the top of which was about 18 feet from the floor. The whole covered with moss and adorned with flowers, neatly arranged. The floor was a mosaic of dahlias to which there was an ascent of several steps, and on the platform was placed Mr. Platt Evens's globe of gold fish.

Mr Jackson's design was a Gothic Monument, in the style of those in Europe called *Croixes*, from the circumstance of their being each surmounted by a cross, which they are built to sustain. It was of an octagonal form, the parts finely proportioned, and with all the decorations appropriate to that kind of monuments. It was covered with moss and ornamented very gorgeously with dahlias, those splendid flowers, of which he has

exhibited such remarkably fine specimens this season. The height was about 18 or 20 feet, its proportions were remarkably good, and altogether it formed a striking and attractive point in the exhibition.

Near the west end of the hall, in the centre, was Mrs. Hoffner's beautiful Floral Cottage, which with its accessories formed a point of attraction altogether irresistible. The cottage was about six feet square, and with the two steps of ascent about 8 or 9 feet high. It was formed of lattice and wire work, in which the following climbing vines were so skilfully interwoven as to cover it entirely, without showing any redundancy, viz :—*Lophosperma scandens*, *Maurandya*, *Barclayana* pink and blue, *Manettia coccinea*, *Ipomea Learii* and *I. coccinea*, and scarlet and white Cypress vines. These were kept constantly flowering the whole of the exhibition, being planted in cases on each side, made for the purpose, covered with moss, and sustaining also several varieties of *oxalis* in blossom. At each corner of the cottage was a marble statue (about three feet high,) each representing one of the four seasons. Two lambs sculptured in marble, lay one on each side of the steps leading into the cottage, and in the interior were a chair and table; on the latter was a globe of gold-fish, above which hung a rare and curious orchid, the *Stanhopea tigrina*, with a spike of its strange and beautiful blossoms hanging downwards, while its leaves were growing upwards out of a bulb of moss, which was made to furnish as near a resemblance to its usual habitat on the branch of a high tree as possible. The chair (and sometimes another) was occasionally occupied by a beautiful child, who dispensed bouquets of flowers to such as made suitable application for them.

The smaller designs were in good taste, and produced a pleasing effect,—Mr. McAvoy's moss vase and bouquet of flowers, however, must not be classed among them; for it was 8 or 9 feet high and 5 or 6 feet in circumference. The bouquet which filled it was composed of fine flowers arranged with great care and labor, and large enough for the Queen of the Giants.

Mrs. McAvoy's Wreath which was thirty-six feet long, extending from the centre to the wall, was also a work displaying great good taste and much careful labor in its formation and arrangement. The premium, however, was adjudged to Mr. Sayer's wreath, extending from the same centre to the opposite wall. They were so near alike that they appeared to be but one.

A wreath of evergreens extended along the centre of the hall, and the two iron columns at the west end were wreathed with the same.

The other designs will be mentioned in the awards: they exhibit great good taste, and most of them being works of ladies, give indication of an interest on the part of the better half of humanity, in our horticultural pursuits, which will ensure a continuation of successful efforts in the path of improvement.

The catalogue of plants at this exhibition, shows that much attention has been given by our horticulturists to the collection and care of rare and curious exotics, and we have good reason to expect from them more aid in developing the vegetable wealth,—the rare and valuable products of the

vegetable kingdom,—of this continent, than is usually looked for in what was so lately the backwoods of our country.

The floral department, although it was more full than either of the others, might have been extended very considerably, if it had been judged expedient."

FLOWERS: The principal exhibitors of plants and flowers, were the President, Mr. Ernst; S. S. Jackson, who exhibited about 30 plants; Jacob Hoffner, who displayed the large number of 150 plants, some of them rare; William Heaver, about 28 plants; H. Brachman, 28 plants, and N. Longworth, about 40 plants, &c.

FRUITS: The department of fruits was by no means as well represented as that of flowers, but it might have appeared to much greater advantage if our fruit cultivators could be brought to the belief that it would be proper for them to exhibit the best they have, even if they have no hopes of having premiums awarded to it. The causes of an extraordinary deficiency of fruits are referred to in the report of the Council.

R. Buchanan exhibited 23 varieties of apples, 2 of pears, and 5 of grapes, including a White Catawba. Dr. Petticolas, 27 varieties of apples. M. S. Wade, 12 varieties of apples. F. B. Williams, 8 varieties of apples. J. F. Warder, 20 baskets of peaches, mostly seedlings. N. Longworth, 10 varieties of grapes, raised under glass, among them the Victoria; also, 8 varieties of native grapes.

The display of vegetables was large and excellent.—(*Report.*)

ART. V. *Massachusetts Horticultural Society.*

Saturday, Nov. 3d.—An adjourned meeting of the Society was held to-day,—the President in the chair.

The Chairman of Flower Committee reported the list of premiums awarded during the year. [This will appear in our January number.]

Mr. Haggerston submitted a vote, recommending an alteration in the rules and regulations of the exhibitions, so as to exclude all but members from competing for premiums; also, that no member shall be entitled to a gratuity on plants, fruits, &c., unless offered in competition for the respective premiums, as advertised by the Society, and the gratuity shall in no case exceed the lowest premium; also, that the 17th rule be amended by striking out all after the first clause.

The whole was submitted to the committee appointed at the last meeting.

A committee of three was appointed to correspond with the leading horticultural societies of the country in regard to an arrangement of the time for holding the annual exhibitions of 1850, so as to be convenient and advantageous to the members, and C. M. Hovey, the Treasurer, and the Recording Secretary, were appointed the committee.

The Committee on Exchanges with M. Vattermare, reported that they

had attended to the duty assigned them, furnishing him with duplicate copies of all the Transactions of the Society.

The Recording Secretary sent in his resignation, saying he was about to leave the vicinity, and a committee was appointed to nominate and report a new candidate at the next meeting, and J. S. Cabot, Jos. Breck, and E. Wight, were appointed the committee.

On motion of Mr. Cabot it was voted, that the thanks of the Society be presented to the Recording Secretary, and, as a mark of esteem for his services, a piece of plate not exceeding in value thirty-five dollars.

The President and Treasurer were appointed a committee to carry out the vote.

B. M. Watson, Plymouth, C. Heard, Brighton, and A. Lackey, Marblehead, were admitted members.

Adjourned two weeks, to November 17th.

Exhibited.—**FRUIT**: From O. Johnson, very fine specimens of R. I. Greening apples. From A. Wood, fine Newtown Pippins. From J. Owen, Lewis, Napoleon, Le Curé, Glout Morceau, Beurré Diel, Bezi de la Motte, Bicknall, and three other sorts of pears. From J. B. Mantel, an unnamed pear—inferior. From Hovey & Co., Belle Epine Dumas pears.

Nov. 10th.—*Exhibited.*—**FRUIT**: From the President, Swan's Orange pear. From J. Lovett, 2d, very large and beautiful Beurré Diel and Urbaniste pears. From A. Aspinwall, fine Beurré Diel pears. From Josiah Stickney, fine Coffin's Virgoulouse pears. From D. Hall, Medford, Beurré Diel pears. From John Gordon, Queen of the Low Countries pear. Seedling pears from F. Tudor, Esq., too ripe to test their quality—size large, and a good looking pear. From Hovey & Co., Knight's Monarch pear, exceedingly melting, rich and fine, fully equal to its reputation, also Belle Epine Dumas pears. Seedling apple by J. M. Blaney, small and of pleasant flavor.

VEGETABLES: From R. Sherwin, 8 large potatoes, weighing 8 pounds six ounces. From A. Hatch, Saugus, a dish of potatoes, raised from the ball, the product of one seed. From J. E. Teschemacher, Endive, very fine.

Nov. 17th.—An adjourned meeting of the Society was held to-day,—the President in the chair.

The committee appointed to nominate a member to fill the vacancy occasioned by the resignation of the Recording Secretary, reported the name of the Rev. D. Leach, who was elected to that office.

Mr. A. Bowditch was chosen a member of the Committee on Flowers, to fill the vacancy occasioned by the resignation of E. C. R. Walker.

Mr. Haggerston presented a resolution which he requested should be appended to the Report of the Committee on Flowers. It proposed a vote of thanks to the President of the Society for his beautiful exhibition of flowers, and for his liberality in not competing for premiums and refusing all gratuities. The resolution was unanimously accepted.

D. W. Lincoln, Worcester, W. F. Weld, Boston, A. W. Haven, Portsmouth, C. H. P. Plympton, and Otis Brewer, Boston, were elected members of the Society.

Adjourned two weeks, to December 1.

Exhibited.—FRUIT: From J. F. Allen, four kinds of grapes. From S. Downer, Jr., fine specimens of Beurré Diel pears. From H. Vandine, fine Glout Morceau and Marie Louise pears. From T. Needham, Reine de Nice and three other kinds of grapes. From E. S. Rand, Cross pears, not mature. From A. Coolidge, Cambridge, pears without name, proved to be the Belle Epine Dumas. From J. Washburn, Sieulle pears, very fine. From D. S. Curtis, Easter Beurré, and a pear without name, believed to be the Monarch.

HORTICULTURAL MEMORANDA

FOR DECEMBER.

FRUIT DEPARTMENT.

Grape Vines may now be pruned, performing the operation in unfavorable weather when out-door work cannot be done—thus saving valuable time at this busy season of the year. After they are pruned, the old wood should be cleared of the rough and loose bark, and then washed with whale oil soap, diluted to the consistence of thin paint, using a brush so as to fill all the crevices around the eyes, and thus destroy all insects which may lurk in such places; they may then be laid along the front of the house and loosely tied till such time as the swelling of the eyes foretells the time for again tying them up to the trellis. The borders should now be covered with three or four inches of old manure, adding first a light sprinkling of guano, which will penetrate the ground by the rains of winter. Vines in pots should now be pruned, and then placed away in a cool cellar or shed, out of the way of severe frost. Vines in the open air should now be pruned, and a barrowful of manure applied to each root.

Fig Trees, in pots, should be pruned, and have the branches washed with whale oil soap, afterwards placing them in a cool place out of danger of severe frost.

Peach Trees, in pots, should be pruned, and the branches washed as recommended for figs.

Fruit Trees of all kinds should be protected with a covering of a barrowful of coarse manure.

Strawberry beds should be covered if not already done.

Raspberry beds should also be protected if not already done.

Seeds of Fruit Trees should be planted if the ground remains open.

Scions of pear, apple, cherry, and other fruit trees, may now be cut, placing them in earth, in a cool cellar, till wanted.

Apple Stocks, for root grafting, should now be taken up and laid in where they can be protected so as to be ready for use in February.

Seedling Stocks should either be protected with a light covering of manure, or be taken up and laid in, in a dry situation.

Newly Planted Trees in windy localities should be protected by a strong stake to prevent injury to the roots.

FLOWER DEPARTMENT.

Camelias will now be coming into bloom, and will require to be regularly and frequently watered, syringing over the foliage once or twice a week in good weather. Continue to stake, wash, and put the plants in the best order.

Japan Lilies, in pots, should now be removed to a cool cellar or to any cool place, where they may remain till they begin to grow in February. Protect those planted in the open ground with a thick covering of leaves or manure.

Peonies, wanted for early blooming, should now be taken up and potted. Young plants, in beds, should be protected with a covering of leaves or light compost.

Carnations and Picotees, in frames, should be covered with three or four inches of leaves, covering them with sashes or boards to keep off heavy rains.

Heriaceous Plants should be protected with a covering of leaves or manure.

Verbenas may now be repotted, and the last batch of cuttings potted off.

Nepenthes Fickels, in frames, should be now protected from frost, and they will bloom abundantly all winter.

Roses should now be shifted if they require it. Perpetual and Bourbon roses, in the open ground, should be protected with a good covering of manure. Prairie roses in very cold situations may be pegged down to the ground, where the snow will generally sufficiently protect them from injury. Tree roses should be protected with a covering of straw.

Monthly Pinks and Carnations may now be shifted into larger pots.

Chrysanthemums, done blooming, may now be placed in a cold frame for the winter.

Pelargoniums may now have a second potting, previous to their final shift into their blooming pots.

Cactuses should now be sparingly watered.

Azaleas should now be rather sparingly watered.

Heaths, of spring flowering sorts, should now be repotted, if they require it, and all vigorous shoots topped so as to make bushy plants.

Heliotropes should now be shifted into larger pots.

Achimenes and Gloxinias may be potted the last of the month for early blooming.

Tulip and Hyacinth beds should be protected with a covering of leaves or manure.

Ranunculus beds should now be got in readiness for planting in February, according to the directions of Dr. Horner, in a late number.

Schizanthuses and Nemophilas should now be shifted into larger pots.

Flowering Shrubs, not fully hardy, should be protected by covering them loosely with straw or branches of evergreens.

Rhododendrons and Azaleas should have the roots protected with leaves or manure.

Greenhouse plants of all kinds, in small pots, will require shifting into larger size; they should also be neatly tied to small stakes. Keep the house clean in every part.

